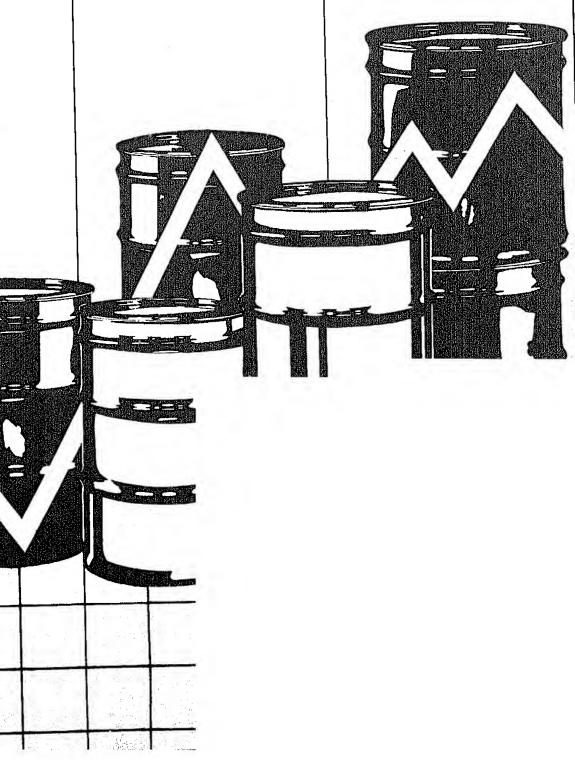
# Weekly Petroleum Status Report



December 15, 1983



The Weekly Petroleum Status Report (WPSR) provides timely information on the petroleum supply situation in the context of historical information, selected prices, and forecasts. The WPSR is intended to provide up-to-date information to the industry, the press, planners, policymakers, consumers, analysts, and State and local governments. It is published each Thursday by the Energy Information Administration. The data contained in this report are based on company submissions for the week ending 7 a.m. the preceding Friday.

This publication is available on an annual subscription basis from the Superintendent of Documents, U.S. Government Printing Office (GPO). Ordering information and purchase of this and other Energy Information Administration (EIA) publications may be obtained from the GPO or the EIA's National Energy Information Center (NEIC). Questions on energy statistics should be directed to the NEIC. Addresses and telephone numbers appear below.

National Energy Information Center, E1-20 Energy Information Administration Forrestal Building Room 1F-048 Washington D.C. 20585 (202) 252-8800

Superintendent of Documents U. S. Government Printing Office Washington, D.C. 20402 (202) 783-3238

## DATA LINE

After 5 p.m. Eastern time on Wednesdays, key statistics from the next morning's issue of the Weekly Petroleum Status Report will be available on DATALINE, EIA's recorded message service. The number is 202/252-6342. After noon Eastern time on Fridays, the message will also contain key statistics from the next Monday's issue of Weekly Coal Production.

If a week contains a Monday, Tuesday or Wednesday holiday, both DATALINE and publication schedules will be delayed one day.

Remember the DATALINE number: 202/252-6342.

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This report was prepared by the Energy Information Administration, the independent statistical and analytical agency within the Department of Energy. The information contained herein should not be construed as advocating or necessarily reflecting any policy position of the Department of Energy or any other organization.

# Highlights

#### Refinery Operations

Crude oil input to refineries averaged 12.0 million barrels per day for the four weeks ending December 9, 1983. Refinery capacity utilization averaged 74.8 percent during the period. During the four weeks ending December 9, 1983, motor gasoline production averaged 6.7 million barrels a day, and distillate fuel oil production averaged 2.7 million barrels a day.

#### Stocks

On December 9, 1983, stocks of crude oil (excluding the Strategic Petroleum Reserve) stood at 354.1 million barrels. Stocks of product stood as follows: total motor gasoline at 232.6 million barrels; distillate fuel oil at 159.8 million barrels; and residual fuel oil at 52.5 million barrels.

#### **Imports**

Net imports of crude oil (including imports for the Strategic Petroleum Reserve) and petroleum products together averaged 4.3 million barrels a day for the four weeks ending December 9, 1983, about 6 percent below the average a year ago. Gross imports of crude oil (excluding the Strategic Petroleum Reserve) averaged 3.1 million barrels a day for the four-week period ending December 9, 1983.

#### **Products Supplied**

Total petroleum products supplied averaged 15.3 million barrels a day for the four- week period ending December 9, 1983, which is about 1 percent above the rate supplied a year ago. Motor gasoline was supplied at a rate of 6.6 million barrels a day, which is about 1 percent above the rate supplied a year ago. Distillate fuel oil was supplied at a rate of 3.0 million barrels a day, about 15 percent above the rate supplied a year ago.

#### World Crude Oil Price

The estimated weighted average international price of crude oil as of December 13, 1983, remains at \$28.63 a barrel.

# **Spot Market Product Price**

For the week ending December 9, 1983, the average spot market price of 98 octane gasoline on the Rotterdam market decreased 12 cents to \$32.94 a barrel; the gasoil price decreased 47 cents to \$33.11 a barrel, and the price of residual fuel oil increased 45 cents to \$27.10 a barrel. On the New York market, the average spot price of 89 octane regular gasoline decreased 76 cents to \$31.90 a barrel; the price of No. 2 heating oil increased 11 cents to \$33.08 a barrel and the residual fuel oil price increased 5 cents to \$28.25 a barrel.



	Four-Week Ave		Percent	Naily /	lative Averages Nays	Percent
		12/09/82	Change	1983	1982	Change
Crude Oil Supply						
1) Domestic Production 1	E8,621	R,669	-n.6	ER,659	8,652	0.1
2) Net Imports (Including SPR) <sup>2</sup>	3,128	3,374	-7.3	3,184	3,282	-3.0
3) Gross Imports (Excluding SPR)	3,126	3,453	-9.5	3,118	3,353	-7.0
2) Net Imports (Including SPR) <sup>2</sup> 3) Gross Imports (Excluding SPR) 4) SPR Imports 5) Exports	178	164 242	77 5	237 E171	168 239	
5) Exports 6) SPR Stocks Withdrawn (+) or Added (-)	E176 -177	-162	-27.5 	-236	-177	-28.4
7) Other Stocks Withdrawn (+) og Added (-)	259	-86		-12	23	
R) Products Supplied and Losses	E-67	-53		E-66	-62	
9) Unaccounted-for Crude	208	-7R		183	74	
10) Crude Oil Input to Refineries	11,971	11,664	2.6	11,711	11,791	-0.7
Other Supply	E1 E00	1 614	1.6	E1 EE7	1 545	0.7
11) NGL Production 12) Other Hydrocarbon Input and Alcohol Input	E1,589 E56	1,614 52	-1.6 6.9	E1,557 E53	1,545 53	0,7 0.1
13) Crude Oil Product Supplied'	E66	51	29.5	E65	59	9.8
14) Processing Gain	569	588	-3.2	492	525	-6.4
15) Net Product Imports .	1,211	1,238	-2.2	1,080	1,054	2.4
16) Gross Product Imports	1,714	1,803	-4.9	1,657	1,627	1.9
17) Product Exports _	£503	565	-11.0	E578	573	0.8
18) Product Stocks Withdrawn (+) or Added (-) <sup>5</sup>	-143	-62		128	256	
19) Total Product Supplied for Domestic Use	15,318	15,146	1.1	15,084	15,283	-1.3
Products Supplied	6.600	6 567	0.5	6 604	¢ ¢20	
20) Motor Gasoline	6,6N8 231	6,567 211	n.6 9.5	6,604 209	6,539 208	1.0
21) Naphtha-type Jet Fuel 22) Kerosene-type Jet Fyel	891	844	5.5	835	801	0.1 4.2
23) Distillate Fuel Oil.	2,983	2,584	15.5	2,626	2,659	-1.2
23) Distillate Fuel Oil <sup>15</sup> 24) Residual Fyel Oil <sup>17</sup>	1,208	1,593	-24.2	1,391	1,724	-19.3
25) Other Oils <sup>6</sup>	3,398	3,347	1.5	3,420	3,352	2.0
26) Total Products Supplied	15,318	15,146	1.1	15,084	15,283	-1.3
Petroleum Stocks					Percent (	Change from
Millions of Barrels)	12/09/8:	3 12	2/02/83	12/09/82	Previous Wee	ek Year Ag
Crude Oil (Excluding SPR) <sup>7</sup>	354.1	Ł	348.2	355.6	1.7	NM
Total Motor Gasoline	232.6		232.0	233.7	0.3	NM
Finished Motor Gasoline	196.4	1	194.2	192.7	1.2	NM
Blending Components	36.		37.8	41.0	-4.4	NM
Naphtha-type det Fuel	6.6		6.1 26.6	6.4	-2.4 -1.7	NM NM
Kerosene-type Jet Fuel Distillate Fuel Oil	36.0 159.8		36.6 162.0	33.9 185.6	-1.7	nn NM
Residual Fuel Oil	52.		50.9	66.9	3,2	Nia
	106.2		108.2	110.1	-1.8	-3.
Unfinished <sub>A</sub> Oils Other Oils	E181.1		E183.0	173.9	-1.0	NM.
Total Stocks (Excluding SPR)	1,128.		,127.0	1,166.0	0.1	NM
Crude Oil in SPR	374.9		371.3	291.0	0.9	28.7
Total Stocks (Including SPR)	1,502.9	• 1	1,498.3	1,457.0	0.3	NM

NM=Not meaningful because of different stock basis. See Appendix D.

E=Estimate based on monthly data.

<sup>1</sup> Includes lease condensate.

<sup>1</sup> Includes lease condensate.

2 Net Imports = Gross Imports (line 3) + SPR Imports (line 4) - Exports (line 5).

3 In 1983 crude oil burned as fuel is treated as a product and a new category, crude oil product supplied, has been created. In prior years crude oil burned as fuel was treated as a transfer of crude oil to residual and distillate fuel oil product categories and was an element of the product supplied calculations of those products. Product supplied series for distillate and residual fuel oils for 1982, shown in the second and fifth columns of the U.S. Petroleum Balance Sheet have been recalculated without these trans See Appendix D. Among the product supplied categories of the balance, crude oil product supplied is included in other oils product supplied.

4 Includes unfinished oils and natural gas plant liquids for processing.

5 Includes an estimate of minor product stock change based on monthly data.

6 Other oils product supplied includes crude oil product supplied and the reduction for reclassified produr 7 Includes crude oil in transit to refineries.

8 Included are stocks of all other oils such as aviation gasoline, natural gas liquids (including ethane), kerosene, petrochemical feedstocks, special naphthas, lube oils, wax, coke, asphalt, road oil, and miscellaneou oils. For the current two weeks, stocks of these minor products are estimated from monthly data.

Note: Due to independent rounding, individual product detail may not add to total.

The percentages shown are calculated using unrounded numbers.

SOURCES:

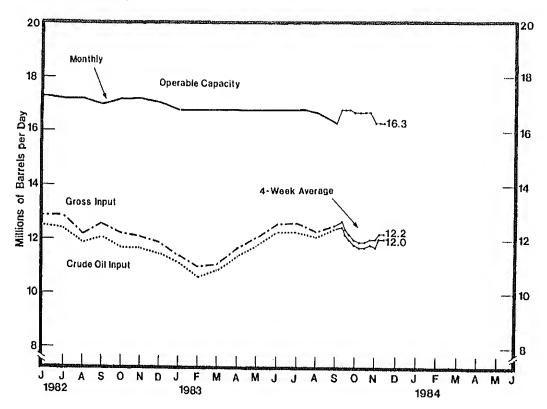
SOURCES:

• 1981-1982: EIA, "Petroleum Supply Annual."

• 1983 Monthly Data: EIA, "Petroleum Supply Monthly."

• 1983 Four-Week Averages: Estimates based on EIA weekly data.

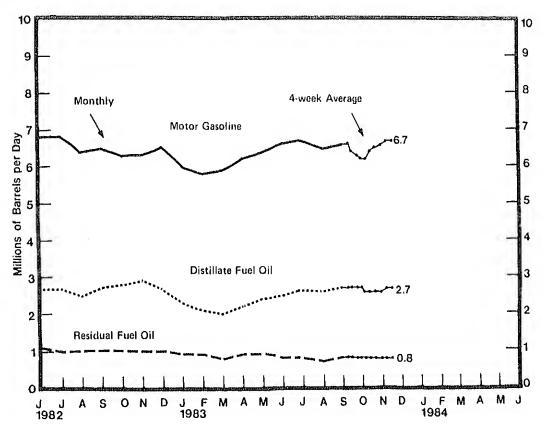
# Refinery Inputs and Utilization (Millions of Barrels per Day)



Year/Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981	· · · · · · · · · · · · · · · · · · ·										<del></del>	
Crude Oil Input	13,2	12,9	12.4	12.1	12.3	12.4	12,3	12.9	12.5	12.1	12.2	12,3
Gross Inputs	13.5	13.2	12.6	12.3	12.6	12.7	12.6	13.2	12.7	12.4	12.6	12.7
Operable Capacity	18.6	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.6	18.4	18.4	18.4
Percentage Utilization <sup>1</sup>	72.5	70.8	67.7	65.7	67.2	68.1	67.4	70.6	68.4	67.0	68.2	69.2
1982												
Crude Oil Input	11.6	11,2	11.3	11.4	11.8	12.5	12,4	11.9	10.1	117	44 7	44.5
Gross Inputs	12.0	11.6	11.7	11.8	12.2	12.9			12.1	11.7	11.7	11.5
Operable Capacity	17,9	17.8	17.8	17.8	17.8		12.9	12.2	12.6	12.2	12.1	11.9
Percentage Utilization <sup>1</sup>	67.0	65.1	65.5	66.2	68.8	17.3 74.9	17.2 74.9	17.2	17.0	17.2	17.2	17.1
•	0	00.1	00.0	00.2	0.00	74.8	74,9	71.0	73.9	70.6	70.6	69.7
1983												
Crude Oil Input	11.1	10.6	10.9	11.4	11.8	12.3	12.3	12.1	10.4			
Gross Inputs	11.4	11,0	11.1	11.7	12.1	12.6			12.4			
Operable Capacity	16.8	16.8	16.8	16.8	16.8	16.8	12.6 16.8	12.3	12.5			
Percentage Utilization <sup>1</sup>	67.9	65.4	66.0	69.3	71.6	74.9	74.9	16.7 73.7	16.3			
•			00.0	00.0	71.0	74.9	74.9	/3./	76.5			
Average for Four-Week Pe	riod Endir	ıa:										
1983	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9		
Crude Oil Input	12.5	12.2	12.0	11.0	44.7	4.4		<del></del>	·	,	····	
	12.7	12.4	12.0	11.8	11.7	11.7	11.8	11.7	12.0	12.0		
city	E16.8	E16.8	12.2	12.0	11.9	11.9	12.0	12.0	12,2	12.2		
'ization <sup>1</sup>	75.5	73.7	£16.8	E16.7	E16.7	E16.7	E16.7	E16.3	E16.3	E16.3		
	70.0	, / 3./	72.5	71.7	71.0	71.2	71.9	73,4	75.0	74.8		

ts divided by the latest reported monthly operable capacity. See glossary. Percentages are calculated using unrounded numbers, unit," [983, EIA, "Patrolaum Supply Monthly."

U.S. Refinery Production by Product (Millions of Barrels per Day)



Year/Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981											0.0	0.0
Motor Gasoline	6.7	6.3	6.2	6.1	6.1	6.2	6.4	6.6	6.6	6.4	6.6	6.6
Jet Fuel	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	1.0	0.9
Distillate Fuel Oil	3.0	2.8	2.5	2.4	2.5	2.5	2.4	2.7	2.6	2.5	2.7	2.9
Residual Fuel Oil	1.6	1.6	1.4	1.3	1.2	1.2	1.2	1.2	1.3	1.2	1.2	1.3
1982												
Motor Gasoline	6.2	5.9	6.0	6.1	6.3	6.8	6.8	6.4	6.5	6.3	6.3	6.5
Jet Fuel	0.9	1.0	1.1	1.0	0.9	0.9	1.0	1.0	1.0	1.0	1.0	0.9
Distillate Fuel Oil	2.6	2.4	2.3	2.4	2.6	2.7	2.7	2.5	2.7	2.8	2.9	2.7
Residual Fuel Oil	1.2	1.2	1.1	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0
1983												
Motor Gasoline	6.0	5.8	5.9	6.2	6.4	6.6	6.7	6.5	6.6			
Jet Fuel	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1			
Distillate Fuel Oil	2.3	2.1	2.0	2.2	2.4	2.5	2.6	2,6	2.7			
Residual Fuel Oil	0.9	0.9	8.0	0.9	0.9	8.0	8.0	0.7	8.0			
Average for Four-V	Veek Pe	riod Endi	ng:									
1983	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9		
Motor Gasoline	6,6	6.4	6.3	6.2	6.2	6.4	6,5	6.6	6.7	6.7		
Jet Fuel	1.1	1.0	1.0	1.0	1.0	1.0	. 1.0	1.0	1.1	1.1		
Distillate Fuel Oil	2.7	2.7	2.7	2.7	2.6	2.6	2,6	2.6	2.7	2.7		
Residual Fuel Oil	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8		
HOSIGIOUI FUOI OII	0.0	0,0	0.0	0.0	0.0	J.0						

Note: Production statistics represent net production (i.e., refinery output minus refinery input).

Source: Monthly Data: 1981—1982, EIA, "Petroleum Supply Annual," 1983, EIA, "Petroleum Supply Monthly."

Four-Week Averages: Estimates based on EIA weekly data.

# Stocks of Crude Oil and Petroleum Products, U.S. Totals (Millions of Barrels)

Year/Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981	***************************************	······································		<del></del>								
Crude Oil	374.0	378.2	393.0	397.5	393.7	384.7	385.9	362.0	356.0	364.0	366.0	363.5
Motor Gasoline	276.1	284.0	285.0	272.1	258.3	241.6	227.7	233.3	237.1	236.1	248.4	253.0
Finished Gasoline	226.3	229.6	232.1	223.2	212,6	194.0	185.7	188.6	190.7	190,5	200.6	203.4
Blending Components	49.8	54.4	52.9	48.9	45.7	47.6	42.0	44.7	46.4	45.6	47.8	49.5
Jet Fuel	39.5	38.6	39.0	40.4	44,5	44.9	44.8	44.7	43.1	42.7	42.0	41.1
Distillate Fuel Oil	179.4	172.5	164.3	164.6	171.8	179.9	186.3	200.2	207.3	201.2	200.1	191.5
Residual Fuel Oil	82.1	77.9	74.8	72.9	78.1	69.4	69.3	74.9	80.2	79.9	81.4	78.0
Unfinished Oils	121.5											
Other Oils		122.3	126.2	126.5	126.3	126.1	126.1	124.5	118.4	119.5	116.4	111.3
	202.7	199.1	198.1	206.5	208.5	220.5	225.4	232.8	234.6	226.7	224.6	214.9
Total Stocks (Excl. SPR) Crude Oil in SPR	1,275.3	1,272.5	1,280.3	1,280.5	1,288.3	1,267.1	1,265.4	1,272.5	1,276.7	1,270.0	1,278.9	1,253,3
Total Stocks (Incl. SPR)	112,5	116.1	120.9	134.2	150.1	163.1	173.1	184.7	199.2	214.8	222.5	230.3
TOTAL STOCKS (THEI, SPR)	1,387.8	1,388.5	1,401.2	1,414.8	1,438.3	1,430.2	1,438.5	1,457.2	1,476.0	1,484.8	1,501.5	1,483.6
1982		^									Λ	
Crude Oil 2	371.0	371.8	360.7	354.8	348.5	344.1	345.7	352.9	340.7	351.0	357.6	349.7
Motor Gasoline	260.8	256.6	246.5	221.3	213,9	218.5	225.9	226.9	233.6	234.4	230,0	235,4
Finished Gasoline	213.2	208.4	198.1	178.6	173.1	177.1	182.7	185.2	191.1	192.4	189.3	194,4
Blending Components	47.6	R48.3	48.5	42.7	40.8	41.4	43.2	41.8	42.5	42.0	40.7	40.9
et Fuel	36.9	R36.9	42.5	44.1	41.7	39.9	39.8	40.7	39.6	40.9	40.6	36.
Distillate Fuel Oil	164.4	147.4	126.3	108.0	113.6	123.7	148.1	158.7	161.2	170.1	185.6	178,0
Residual Fuel Oil	68.7	58.5	58.1	53.6	59.0	60.7	58.9	52.6	61.8	63.6	66.4	
Infinished Oils	115.9	116.5	115.9	119.1	118.2	118.0	117.8	116.8	117.8	113.3	111.8	66.2
Other Oils	203.0	199.1	193.3	189.2	190.8	191.1	190.1	186.4				105.3
otal Stocks (Excl. SPR)	1,220.6	1,186.9	1,143,4						181.3	174.6	173.3	164.1
rude Oil in SPR	235.3			1,090.0	1,085.7	1,096.0	1,126.3	1,134.9	1,136.1	1,147.8	1,165.2	1,136.1
otal Stocks (Incl. SPR)	235.3 1,455.9	241.2 1,428.2	248.5 1,391.9	255.5 1,345.6	261.0	264.1	267.2	273.6	277.9	284.6	290.0	293.8
	1,400.0	1,420.2	1,301,0	1,549.6	1,346.7	1,360.2	1,393,5	1,408.5	1,414.0	1,432.4	1,455.2	1,429,9
1983 <sup>3</sup>												
Crude Oil <sup>2</sup>	360.9	366.0	358.6	365.B	354.6	<b>3</b> 53.8	342.0	355.1	351.6			
Motor Gasoline	250.9	251.1	224.0	220.8	224,6	223.2	230.6	226.4	229.6			
Finished Gasotina	208.3	207.4	183,7	182.9	186.8	183.3	189.8	184.8	189.6			
Blanding Components	42.6	43.8	40.3	37,9	37.8	39.9	40.8	41,6	40.0			
let Fuel	41.7	40.5	42.2	40.3	41.3	41.3	41.7	40.2	41.8			
Distillate Fuel Oil	168.2	147.4	118.7	103.2	109.2	113.8	131.0	143.5	154.7			
Residual Fuel Oil	60.7	53.1	46.3	46.6	50.9	50.1	51.9	48,3	49.7			
Infinished Oils	110.3	108.3	111.3	114.1								
Other Oils	159,6	159.3	162.5		112.4	110.1	107.1	110.5	112.6			
Total Stocks (Excl. SPR)				167.2	177.2	184.4	189.2	191.5	191,0			
	1,152.2	1,125.7	1,063.6	1,057.9	1,070.3	1,076,8	1,093.5	1,115,6	1,131.1			
Grude Oil in SPR Fotal Stocks (Incl. SPR)	300.6	306.1	311.8	317.7	326.8	332,5	340.7	351,8	361.0			
oter stocks (INC), SPK)	1,452.8	1,431.9	1,375.4	1,375.7	1,397.1	1,409.3	1,434.2	1,467.4	1,492.1			
Yeek Ending:	40.	4014										
9833	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9		
Cruda Oil <sup>2</sup>	252.0	250.0	000 5	212.5						~~~···································		
fotor Gasoline	353.8	356.3	353.7	346.2	357.9	361.4	356.9	352.7	348.2	354.1		
Finished Gasoline	226.7	226.4	224.2	223.5	221.7	224.7	228.8	226.2	232.0	232.6		
Blanding Components	189.9	189.4	186.9	186.4	184.4	187.9	191.8	190.0	194.2	196.4		
et Fuel	36.8	36.9	37.3	37.1	37.4	36,8	37.0	36.1	37.8	36.1		
Pistillate Fuel Oil	40.7	43.2	42.8	43.2	43.6	42.9	41.5	42.2	42.7	42.0		
	157.0	157.7	161.6	163.6	160.0	162.1	160.7	160.5	162.0	159.8		
esidual Fuel Oil	46.9	48,0	46,7	46.8	47.2	47.1	47.4	48.1	50.9	52.5		
nfinished Oils	113.0	110.8	112.8	112.1	110.9	108.9	110.5	108.6				
ther Oils 4	E191.0	E189.5	E188.0	E185.8	E184.9	E184.5			108.2	106.2		
otal Stocks (Excl. SPR)	1,129.1	1,131.9	1,129.9	1,121.3	1,126.1		E184.2	E183.5	E183.0	E181.1		
rude Oil in SPR	361.3	364.9	365.2	366.1	368.3	1,131.6	1,130.0	1,121.9	1,127.0	1,128.4		
otal Stocks (Incl. SPR)	1,490.4	1,496.8	1,495.1	.1,487.4	1,494.4	369.6	370.2	370.6	371.3	374,5		
	1,700.7	1,750.0	1.450.1	1.487.4	IAWAA	1,501,2	1,500.2	1,492.5	1,498.3	1,502.9		

E=Estimated. See Glossary for definition of "Stock Change (Refined Products)" for explanation of other oils estimate methodology.

1 Product stocks include those stocks held at refineries, in pipelines, and at major bulk terminels. Stocks held at natural gas processing plants are included in "Other Oils" and in totals. All stock levels are as of the end of the period.

2 Crude oil stocks include those stocks held at refineries, in pipelines, in leese tenks, and in transit to refineries, and do not include those held in the Strategic Petroleum Reserve.

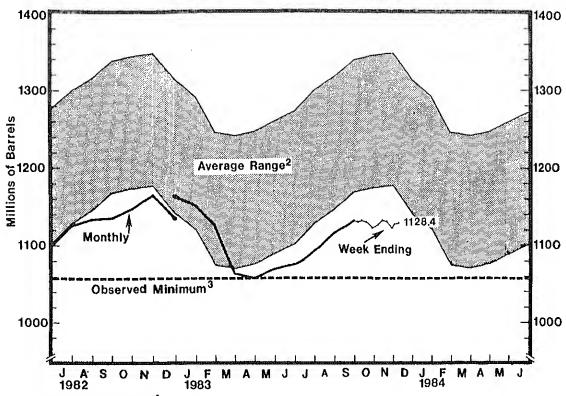
3 See Appendix D for explanation of the 1983 new stock basis.

4 Weekly totals for stocks of other oils are estimated using monthly data. Other oils include kerosene, aviation gasoline, netural gas liquids including ethane, petrochemical feedstocks, special naphthas, lube oil, wax, coke, asphelt, road oil, and miscelleneous oils.

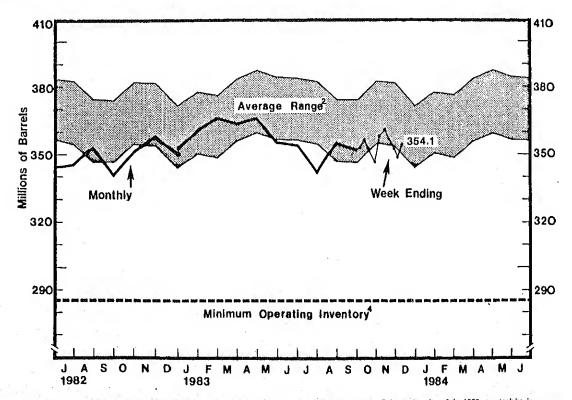
Sources: 
Monthly Data: 1981–1982, EIA, "Petroleum Supply Annuel," 1983, EIA, "Petroleum Supply Monthly."

• Week-Ending Stocks: Estimates based on EIA weekly deta.

Stocks of Crude Oil and Petroleum Products, U.S. Total<sup>1</sup> (Millions of Barrels)



Stocks of Crude Oil, U.S. Total 1 (Millions of Barrels)



<sup>1</sup> Excludes stocks held in the Strategic Patroleum Reserve and includes crude oil in transit to refineries. See Appendix D for explanation of the 1983 new stock basis.

2 Average level, width of average range, and observed minimum are based on three years of monthly date: July 1980—June 1983. The sessonel pattern is based on seven years of monthly date: Juny 1976—December 1982. See Appendix B for further explanation.

3 The observed minimum for total stocks in the last three-year period July 1980—June 1983, was 1057.9 million barrels. It occurred in April 1983. See Appendix B for further explanation.

4 The National Petroleum Council (NPC) defines the Minimum Operating inventory as the inventory level below which operating problems and shortages would begin to appear in a defined distribution system. In its 1983 study, the NPC estimated this inventory level for ended oil to be 285 million barrels. See Appendix B for further explanation.

Source: • Ranges and Seasonal Patterns: 1976—1980, EIA, "Petroleum Statement, Annual (Final Summery)," 1981—1982, EIA, "Petroleum Supply Annual."

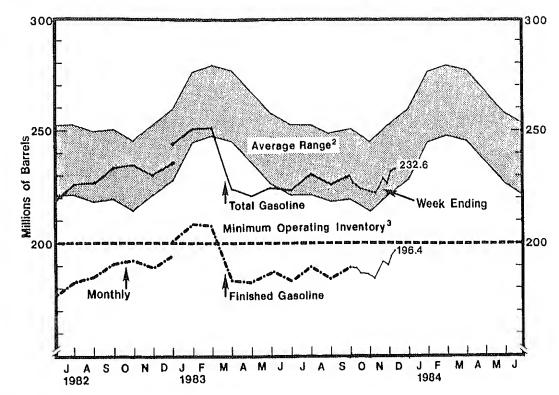
• Monthly Data: 1982, EIA, "Petroleum Supply Annual." 1983, EIA, "Petroleum Supply Monthly."

• Week-Ending Stocks: Estimates based on EIA weekly data.

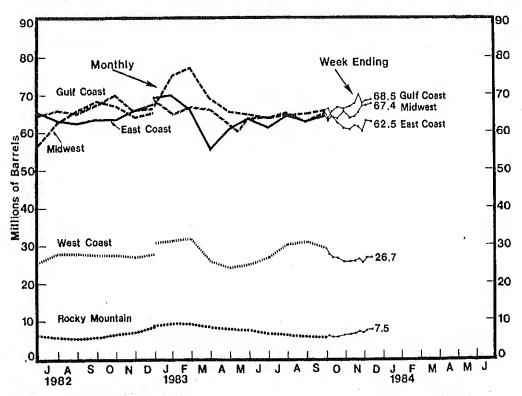
Stocks of Motor Gasoline by Petroleum Administration for Defense District (Millions of Barrels)

Year/District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981										<del>*************************************</del>		
Finished Gasoline	226.3	229.6	232.1	223.2	212.6	194,0	185.7	188.6	190.7	190.5	200.6	203.4
Blending Components	49.8	54.4	52.9	48,9	45.7	47.6	42.0	44.7	46.4	45.6	47.8	49.5
Total Gasoline	276.1	284.0	285.0	272.1	258.3	241.6	227.7	233,3	237.1	236.1	248.4	253.0
East Coast (PAD 1)	71.7	74.2	79.5	77.9	73.1	69.5	62.7	64.3	69.6	69,6	69.7	69,5
Midwest (PAD 2)	86.0	90.4	89.7	84,2	80.1	72.4	65.9	66.7	65.3	66.0	69.2	72.6
Gulf Coast (PAD 3)	77.2	79.6	78.5	76.2	72.2	65.9	64.0	68.6	68.5	65.0	70.6	69.5
Rocky Mountain (PAD 4)	9.7	10.3	10.2	9.4	8.6	7.4	6.5	6.0	5.8	6.3	7.7	8,5
West Coast (PAD 5)	31.5	29.5	26.9	24.4	24.3	26.3	28.6	27.8	27.9	29.2	31.2	32.9
1982												
Finished Gasoline	213.2	208.4	198.1	178.6	173.1	177.1	182.7	185.2	191.1	192.4	189.3	194.4
Blending Components	47.6	48.3	48.5	42.7	40.8	41.4	43,2	41.8	42.5	42.0	40.7	40.9
Total Gasoline	260.8	256.6	246.5	221.3	213.9	218.5	225.9	226.9	233.6	234.4	230.0	235.4
East Coast (PAD 1)	71.9	69.7	66.8	61.4	63.6	65.5	63.1	62.5	63.5	63.5	66.1	67.5
Midwest (PAD 2)	77.7	78.4	74.0	62.7	56.1	56.4	62.8	65.8	69.3	67.0	64.0	65.3
Gulf Coast (PAD 3)	70.2	69.3	68.0	63.2	63.5	64.9	66.0	65.2	67.5	69.8	65.5	66.2
Rocky Mountain (PAD 4)	9.6	9.9	10.1	9.0	7.7	6.5	5.8	5.5	5.7	6.5	7.1	8.5
West Coast (PAD 5)	31.4	29.3	27.6	25.0	23.2	25.3	28.1	27.9	27.7	27.6	27.2	27.9
19831												
Finished Gasoline	208.3	207.4	183,7	182.9	186.8	183,3	189.8	184.8	189.6			
Blending Components	42.6	43.8	40.3	37.9	37.8	39.9	40.8	41.6	40.0			
Total Gasoline	250.9	251.1	224.0	220.8	224.6	223.2	230.6	226.4	229.6			
East Coast (PAD 1)	69.9	66.0	55.4	60.8	63.6	61.3	64,3	62.6	64.1			
Midwest (PAD 2)	75.3	77.2	68.3	65.4	64,6	63.7	64.6	64.8	65.7			
Gulf Coast (PAD 3)	65.0	66.6	66.3	62.7	64.0	64.7	65.1	62.3	65.0			
Rocky Mountain (PAD 4)	9.4	9.4	8.3	7.9	7.4	6.7	6.4	5.9	5.9			
West Coast (PAD 5)	31.3	31.9	25.8	24.1	25.0	26.9	30.2	30.8	29.0			
Week Ending:												
1983 <sup>1</sup>	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9		
Finished Gasoline	189.9	189.4	186.9	186.4	184.4	107.0	101.0	100.0	104.0	100.4		
Blending Components	36.8	36.9	37.3	37.1	37.4	187.9 36.8	191.8	190.0	194.2	196.4		
Total Gasoline	226.7	226.4	224.2	223.5	221.7		37.0	36.1	37.8	36.1		
East Coast (PAD 1)	63.4	64.2	62.2	60.9	60.5	224.7	228.8	226.2	232.0	232.6		
Midwest (PAD 2)	66.0	64.2	63.5	65.1	63.2	61.4 63.9	61.2	60.0	63.0	62.5		
Gulf Coast (PAD 3)	63.8	65.6	66.3	65.9	66.5		65.1	66.7	66.9	67.4		
Rocky Mountain (PAD 4)	5.9	5.7	5.7	6.0		67.4	69.7	67.4	68.2	68.5		
West Coast (PAD 5)	27.6	26.7	26.5	25.6	6.1 25.6	6.4	6.8	6.6	7.3	7.5		
		2017	۷,0	20,0	20.0	25.7	26.1	25.4	26.6	26.7		

See Appendix D for explanation of the 1983 new stock basis.
 Note: PAD district data may not add to total due to independent rounding.
 Source: 
 Monthly Data: 1981–1982, EIA, "Petroleum Supply Annual," 1983, EIA, "Petroleum Supply Monthly," 
 e Week-Ending Stocks: Estimates based on EIA weekly deta.



Stocks of Motor Gasoline by Petroleum Administration for Defense District<sup>1</sup> (Millions of Barrels)



<sup>1</sup> See Appendix D for further explanation of the 1983 new stock basis.

2 Average level and width of everage range for total motor gazoline are based on three years of monthly data: July 1880—June 1983. The seasonal pattern is based on six years of monthly data: 1978 and 1978—1982. See Appendix B for further explanation.

3 The National Petroleum Council (NPC) defines the Minimum Operating Inventory as the inventory level below which operating problems and shortages would begin to appear in a defined distribution system. In its 1983 study, the NPC estimated this inventory level for motor gazoline to be 200 million barrols. See Appendix B for further explanation.

Source: a Ranges and Seasonal Patterns 1976—1980, EIA, "Petroleum Statemanni, Annual (Finat Summarn)," 1981—1982, EIA, "Petroleum Supply Annual," Monthly Data: 1982, EIA, "Petroleum Supply Annual," 1983, "Petroleum Supply Monthly."

Stocks of Distillate Fuel Oil by Petroleum Administration for Defense District (Millions of Barrels)

Year/District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981									· · · · · · · · · · · · · · · · · · ·		· <del>···</del>	······································
Total U.S.	179.4	172.5	164.3	164.6	171.8	179.9	186.3	200.2	207.3	201.2	200.1	104 -
East Coast (PAD 1)	71.9	69.8	64.7	64.4	68.2	73.8	81,3	86.3	92.0	94.8	200.1 96.0	191.5
Midwest (PAD 2)	57.7	56.1	52.5	52.4	50.5	48.7	49.8	54.1	54.3	51.0	51.6	87.4
Gulf Coast (PAD 3)	34.0	32,3	32.4	34.7	39.2	42.9	40.7	44.5	44.8	39.8	36.7	50.0
Rocky Mountain (PAD 4)	3.4	3.3	3.3	2.9	3.2	3.4	3.7	3.8	3.6	3.3	3.6	35.5
West Coast (PAD 5)	12.4	11.1	11.4	10.3	10.7	11.1	10.8	11.4	12.5	12.3	12.3	3.9 14.7
1982												
Total U.S.	164.4	147.4	126.3	108.0	113.6	123.7	148.1	158,7	161.2	170.1	105.0	170.0
East Coast (PAD 1)	68.3	60.3	44.7	35.0	39.1	44.2	57.4	63.9	68.0	75.7	185.6	178.6
Midwest (PAD 2)	46.7	43.1	39.5	30.8	30.8	33.7	42.6	45.5	45.6	44.2	88.7 45.3	80.6
Gulf Coast (PAD 3)	31.0	26.8	27.6	28.5	31.1	32.6	34.1	35.6	34.0	37.0	45.3 36.9	47.0
Rocky Mountain (PAD 4)	4.1	3,9	3.7	3.1	2.8	3.0	3,4	3.5	3.5	37.0	3.5	34.2
West Coast (PAD 5)	14.2	13.3	10.8	10.5	9.8	10.2	10.6	10.2	10.1	9.6	3.5 11.3	4.0 12.7
1983 <sup>1</sup>												
Total U.S.	168.2	147.4	118.7	103.2	109,2	113.8	131.0	143.5	154,7			
East Coast(PAD 1)	71.1	55.3	38.1	31,8	37.2	41.1	50.9	61.9	67.5			
Midwest (PAD 2)	47.2	46.4	39.0	33.3	30.4	29.6	33,6	36.7	39,1			
Gulf Coast (PAD 3)	31.7	28.9	27.2	26.0	28.8	29.7	32.5	31.3	34.7			•
Rocky Mountain (PAD 4)	4.1	4.0	3.3	2.8	2.9	2.8	3.0	3.0	2.7			
West Coast (PAD 5)	14.1	12.8	11.1	9.4	9.9	10.6	11,0	10.6	10.8			
Week_Ending:												
19831	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9		
Total U.S.	157.0	157.7	161.6	163.6	160.0	162,1	160.7	160.5	160.0	450.0		
East Coast (PAD 1)	69.0	69.8	72.2	73.7	72.2	72.3	71.3	70.4	162.0 70.2	159.8		
Midwest (PAD 2)	37.9	38.2	38.6	39.3	39.7	40.3	40.6	41.4		68.1		
Gulf Coast (PAD 3)	36.9	36.4	37.5	37.8	34.6	36.6	35.7	35.7	42.9 35.0	42.5		
Rocky Mountain (PAD 4)	2.4	2,4	2.3	2.3	2.3	2.3	2.3	2.6		35.6		
West Coast (PAD 5)	10.8	10.9	11.1	10.7	10.7	10.6	10.7	10.5	2.6 11.4	2.6 11.0		

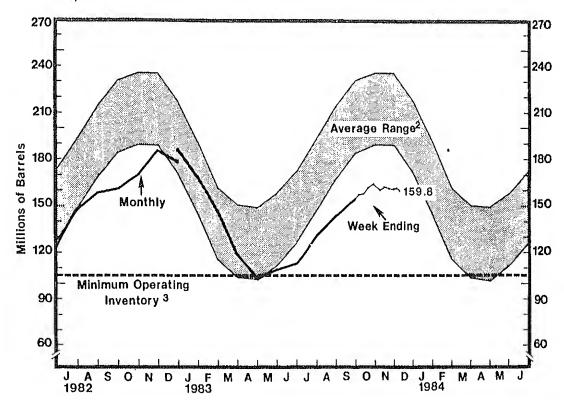
<sup>1</sup> See Appendix D for explanation of the 1983 new stock basis.

Note: PAD district data may not add to total due to independent rounding.

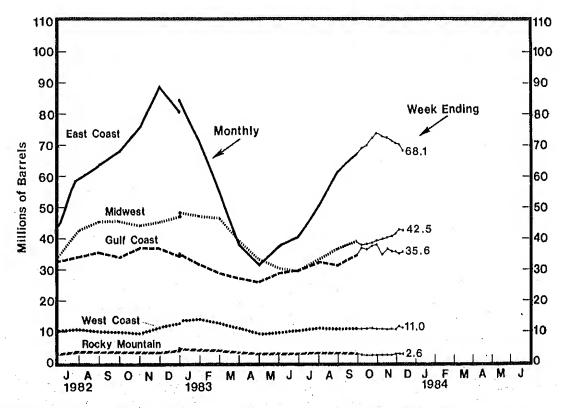
Source: • Monthly Data: 1981—1982, EIA, "Petroleum Supply Annual," 1983, EIA, "Petroleum Supply Monthly."

• Weak-Ending Stocks: Estimates based on EIA weekly data.

# Stocks of Distillate Fuel Oil, U.S. Total<sup>1</sup> (Millions of Barrels)



Stocks of Distillate Fuel Oil by Petroleum Administration for Defense District<sup>1</sup> (Millions of Barrels)



<sup>1</sup> See Appendix D for explanation of the 1983 new stock basis.

<sup>2</sup> Average level and width of average range are based on three years of monthly date: July 1980—June 1983. The seasonal pettern is based on seven years of monthly date: January 1976—December 1982. See Appendix B for further explanation.

3 The National Patroleum Council (NPC) defines the Minimum Operating Inventory as the inventory level below which operating problems and shorteges would begin to appear in a defined distribution system. In its 1983 study, the NPC estimated this inventory level for distillete fuel oil to be 105 million barrels. See Appendix B for further explanation.

Source: • Ranges and Seasonal Patterns 1976—1980, ElA, "Patroleum Stetement Annual (Final Summary)." 1981—1982, ElA, "Petroleum Supply Annual."

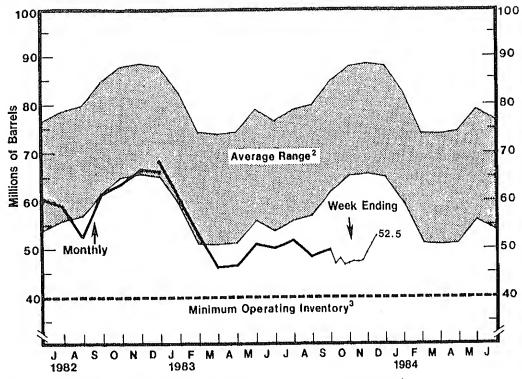
• Monthly date: 1982, ElA, "Petroleum Supply Annual," 1983, ElA, "Petroleum Supply Monthly."

Stocks of Residual Fuel Oil by Petroleum Administration for Defense District (Millions of Barrels)

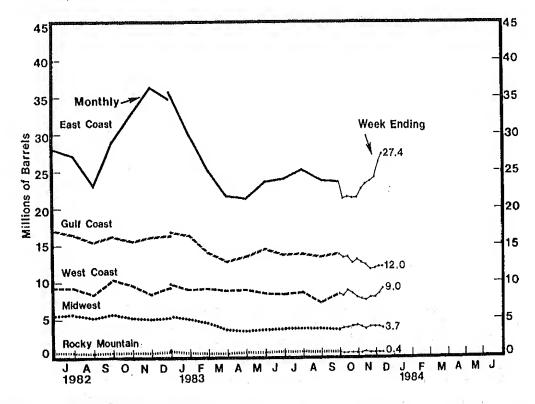
Year/District	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981							20.0	740	00.2	79.9	81.4	78.0
Total U.S.	82.1	77.9	74.8	72.9	78.1	69.4	69.3	74.9	80.2 40.0	40.4	43.0	40.1
East Coast (PAD 1)	39.0	38.5	37.3	36.3	38.2	33.6	33.0	34.4 8.1	40.0 8.5	8.0	8.2	8.3
Midwest (PAD 2)	9.2	9.0	7.9	7.3	7.1	7.0	7.7		20.4	20.4	19.7	18.7
Gulf Coast (PAD 3)	21.8	19.7	19.4	19.1	21.7	17.0	17.4	21.2 0.6	0.7	0.7	0:7	0.7
Rocky Mountain (PAD 4)	8.0	0.7	0.6	0.5	0.6	0.6	0.5	10.7	10.7	10.4	9.8	10.2
West Coast (PAD 5)	11.4	10.1	9.7	9.7	10.5	11.2	10.7	10.7	10.7	10.4	0.0	10.2
1982									04.0	60.6	66.4	66.0
Total U.S	68.7	58.5	58.1	53.6	59.0	60.7	58.9	52.6	61.8	63.6	66.4	66.2
East Coast (PAD 1)	32.2	25.0	25.0	23.4	28.3	28.2	27.1	23.1	29.0	32.8	36.4	34.7
Midwest (PAD 2)	7.7	7.3	7.0	6.2	6.0	5.6	5.7	5.2	5.7	5.1	5.0 16.1	5.2 16.3
Gulf Coast (PAD 3)	17.7	14.7	14.7	13.5	15.0	17.1	16.4	15.5	16.2	15.6		
Rocky Mountain (PAD 4)	0.6	0.7	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.6 9.3
West Coast (PAD 5)	10.3	10.8	10.9	10.0	9.2	9.3	9.3	8.4	10.4	9.6	8.4	9.3
1983 <sup>†</sup>												
Total U.S.	60.7	53.1	46.3	46.6	50.9	50.1	51,9	48.3	49.7			
East Coast (PAD 1)	29.9	25.1	20.6	20.3	23,8	24.0	25.3	23.8	23.5			
Midwest (PAD 2)	5.0	4.5	3,6	3.4	3.5	3.7	3.7	3.7	3.5			
Gulf Coast (PAD 3)	16:3	14.0	12.8	13.4	14.5	13.5	13.8	13.3	13.8			
Rocky Mountain (PAD 4)	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5			
West Coast (PAD 5)	9.0	9.1	8.9	9.0	8.5	8.4	8.6	7.1	8.4			
Week Ending:									40/0	17/0		
1983	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9		
Total U.S.	46.9	48.0	46.7	46.8	47.2	47.1	47.4	48.1	50.9	52.5		
East Coast (PAD 1)	21.3	21.5	21.3	21.4	22.6	23.2	23.6	24.1	26.2	27.4		
Midwest (PAD 2)	3.7	3.8	4.0	4.1	3.9	3.6	3.9	3.9	3.9	3.7		
Gulf Coast (PAD 3)	13.3	13.4	12.6	13.0	12.6	12.3	11.7	11.8	12.0	12.0		
Rocky Mountain (PAD 4)	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4		
West Coast (PAD 5)	8.2	8.9	8.5	7.9	7.7	7.5	7.9	7.9	8.4	9.0		

See Appendix O for explanation of the 1983 new stock basis.
 Note: PAD district data may not add to total due to independent rounding.
 Source: a Monthly Data: 1981–1982, EIA, "Petroleum Supply Annual," 1983, EIA, "Petroleum Supply Monthly,"
 Week-Ending Stocks: Estimates based on EIA weekly data.

Stocks of Residual Fuel Oil, U.S. Total<sup>1</sup> (Millions of Barrels)



Stocks of Residual Fuel Oil by Petroleum Administration for Defense District (Millions of Barrels)

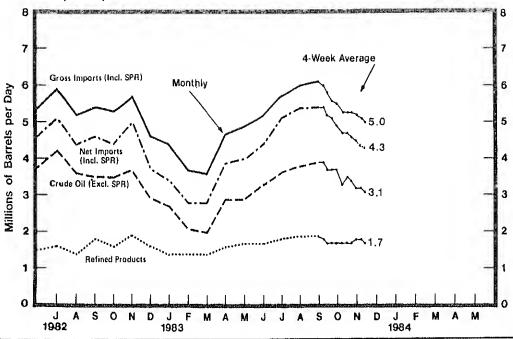


<sup>1</sup> See Appendix D for further explanation of the 1983 new stock basis,
2 Average lavel and width of average range are based on three years of monthly date: July 1980—June 1983. The seasonal pattern is based on seven years of monthly date:
Jenuary 1976—December 1982. See Appendix B for further explanation.
3 The National Petroleum Council (NPC) defines the Minimum Operating Inventory set the inventory level below which operating problems and shorteges would begin to appear in a defined distribution rystem. In its 1983 study, the NPC estimated this Inventory level for estidual fuel oil to be 40 million barrels. See Appendix B for further explanation.

Source: • Ranges and Seasonal Patterns 1976—1980, EIA, "Petroleum Statement Annual (Final Summary)," 1981—1982, EIA, "Petroleum Supply Annual,"

• Monthly Date: 1982, EIA, "Petroleum Supply Annual," 1983, EIA, "Petroleum Supply Monthly,"

# Imports of Crude Oil and Petroleum Products (Millions of Barrels per Day)



Year/Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981												
Crude Oil (Excl. SPR)	4.8	4.8	4,4	4.1	3.9	3.7	4.1	3.9	4.3	3.9	3.8	4.0
SPR	0.1	0.1	0.1	0.3	0.4	0.3	0.2	0.3	0.4	0.5	0.3	0.2
Refined Products	1.9	1.9	1,5	1.3	1.5	1.4	1.5	1.6	1.6	1.6	1.7	1.7
Gross Imports (Incl. SPR)	6.8	6.8	6,0	5.7	5.8	5.4	5.8	5,8	6.4	6.0	5.7	5,8
Total Exports <sup>1</sup>	0.6	0.6	0.6	0.6	0.6	0.4	0.6	0.6	0.5	0.7	0.7	0.7
Net Imports (Incl. SPR)	6.3	6.2	5.4	5.1	5,2	5.0	5.2	5.1	5.8	5.2	5.0	5.2
1982						-						
Crude Oil (Excl. SPR)	3.5	2.8	2.7	2.7	3,1	3.7	4.2	3.6	3.5	3.5	3.7	2.9
SPR	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1
Refined Products	1.6	1.8	1.6	1.5	1,5	1.5	1.6	1.4	1.8	1.6	1.9	1.6
Gross Imports (Incl. SPR)	5.3	4.8	4.5	4.4	4.8	5.3	5.9	5.2	5.4	5.3	5.7	4.6
Total Exports <sup>1</sup>	0.8	0.8	0.9	0.8	8.0	0.7	0.7	0.9	8.0	0.9	8.0	0.9
Net Imports (Incl. SPR)	4.5	4.0	3.6	3.6	4.0	4.6	5.1	4.4	4.6	4.4	5.0	3,7
1983												
Crude Oil (Excl. SPR)	2.7	2.1	2.0	2.9	2.9	3.3	3.6	3.8	3.9			
SPR	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.3			
Refined Products	1.4	1.4	1.4	1.6	1.7	1.7	1.8	1.9	1.9			
Gross Imports (Incl. SPR)	4.4	3.7	3,6	4.7	4.9	5.2	5.7	6.0	6.1			
Total Exports <sup>1</sup>	1.0	0.9	0.8	0.8	0.8	0.8	0.6	0.7	0.7			
Net Imports (Incl. SPR)	3.4	2.8	2.8	3.9	4.0	4.4	5.1	5.4	5.4			
Average for Four-Week Peri	od Endin	a:										
1983	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9		
Crude Oil (Excl. SPR)	3.9	3.7	3,7	3.7	3.3	3.5	3,4	3,2	3.2	3.1		
SPR	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2		
Refined Products	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.7		
Gross Imports (Incl. SPR)	6.0	5.8	5.6	5.5	5.3	5.3	5.3	5.2	5.1	5.0		
Total Exports <sup>1</sup>	E0.6	E0.6	E0.6	E0.6	E0.6	E0.6	E0.7	E0.7	E0.7	E0.7		
Net Imports (Incl. SPR)	5.4	5.2	5.1	4.9	4.7	4.7	4.6	4.5	4.4	4.3		

E=Estimate based on most recent monthly data available.

1 Includes exports of crude oil and refined petroleum products. Exports of crude oil are prohibited under normal circumstances. Some crude oil is shipped to Canada in exchange on a barret-for-barret basis. Shipments of crude oil to Puerro Rico and the Virgin Islands are not prohibited because these territories are U.S. possessions.

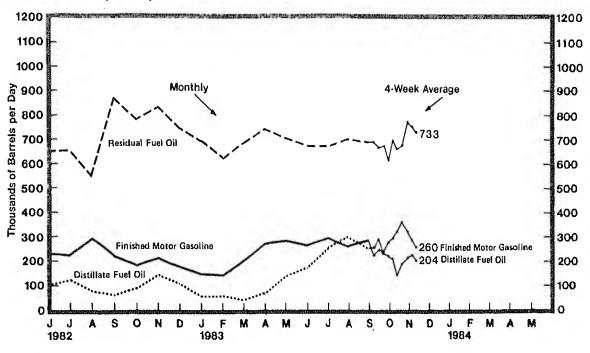
Note: Detail data may not add to total due to independent rounding.

Source: 

Monthly Data: 1981—1982, EIA, "Petroleum Supply Annual," 1983, EIA, "Petroleum Supply Monthly,"

Four-Week Averages: Estimates based on EIA weekly data.

# imports of Petroleum Products by Product (Thousands of Barrels per Day)

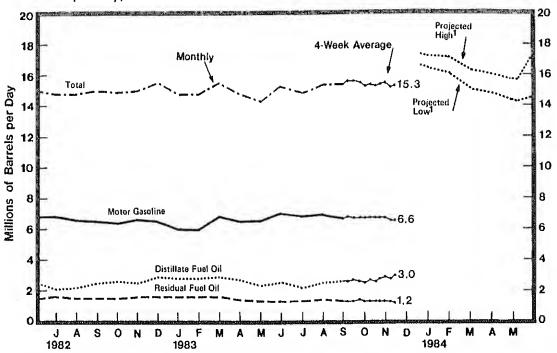


Year/Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981	· · · · · · · · · · · · · · · · · · ·				<del></del>	·····						
Finished Motor Gasoline	138	111	171	186	150	186	151	124	169	147	148	197
Jet Fuel	15	38	76	55	47	68	35	47	46	14	9	7 95
Distillate Fuel Oil	273	325	147	116	179	225 540	179 830	174 819	129 841	119 - 786	124 880	916
Residual Fuel Oil Other1	1,015 453	954 471	699 414	584 389	741 371	356	327	424	438	514	533	491
Other •	400	471	414	309	٦/١	350	527	747	730	VIT	000	-101
1982												
Finished Motor Gasoline	128	133	183	185	182	230	225	291	223	185	211	178
Jet Fuel	10	62	39	47	31	3	31	26	30	20	40	7
Distillate Fuel Oil	97	132	48	59	74	102	125	80	61	91	145	109
Residual Fuel Oil	831	956	912	788	742	652	657	550	872	783	836	747
Other <sup>1</sup>	573	533	427	449	474	504	604	445	592	557	650	564
1983												
Finished Motor Gasoline	148	142	205	273	284	265	297	260	285			
Jet Fuel	27	8	35	15	35	25	22	22	41			
Distillate Fuel Oil	58	58	42	73	141	175	259	302	253			
Residual Fuel Oil	691	632	686	743	709	676	682	705	690			
Other <sup>1</sup>	510	583	429	486	495	575	563	574	597			
Average for Four-Week Pe	riod Endir	201										
1983	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9		
Finished Motor Gasoline	224	248	242	279	299	322	361	322	287	260		
Jet Fuel	224 60	37	44	48	45	49 -	31	32	33	37		
Distillate Fuel Oil	261	292	238	222	211	144	190	215	224	204		
Residual Fuel Oil	690	670	676	620	698	664	679	775	755	733		
Other <sup>1</sup>	519	493	506	494	498	501	478	479	486	481		

<sup>1</sup> Includes imports of kerosene, unfinished oils, motor gasoline blending components, liquefled petroleum gases and other oils.

Source: • Monthly Date: 1981-1982, EIA, "Petroleum Supply Annuel," 1983, EIA, "Petroleum Supply Monthly."

• Four-Week Averages: Estimates based on EIA weekly data.



Year/Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981					<del>, ,</del>							
Motor Gasoline	6.4	6.3	6.3	6.6	6.6	7.0	6.8	6.6	6.7	6.6	6.4	6.7
Jet Fuel	1.1	1.0	1.1	1.0	0.9	1.0	1.1	1.0	1.0	0.9	1.0	1.0
Distillate Fuel Oil <sup>2</sup>	4.1	3.4	2.9	2.5	2.4	2.4	2.4	2.4	2.5	2.8	2.9	3.2
Residual Fuel Oil <sup>2</sup>	2.9	2.5	2.1	1.9	1.8	2.0	2.0	1.8	1.9	1.9	1.9	2.3
Other	3.9	3.8	3.5	3.4	3.7	3.7	3.4	3.5	3.8	3.6	3.4	3.4
Total	18.4	17.0	15.9	15.4	15.4	16.1	15.7	15.3	15.9	15.8	15.6	16.6
1982												
Motor Gasoline	6.0	6.2	6.5	6.9	6.7	6.8	6.8	6.6	6.5	6.4	6.6	6.5
Jet Fuel	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1
Distillate Fuel Oil <sup>2</sup>	3.5	3.1	2.9	3.0	2.4	2.5	2.1	2.2	2.5	2.6	2.5	2.9
Residual Fuel Oil <sup>2</sup>	2.2	2.3	1.9	1.9	1.6	1.5	1.6	1.5	1.5	1.5	1.6	1.6
Other	3.5	3.3	3.3	3.2	3.2	3.2	3.4	3.5	3.5	3.4	3.3	3.4
Total	16.1	16.0	15.6	16.0	14.8	15.0	14.8	14.8	15.0	14.9	15.0	15.5
1983												
Motor Gasoline	6.0	6.0	6.8	6.5	6.5	7.0	6.8	6.9	6.7			
Jet Fuel	0.9	1.0	1.0	1.1	1.0	1.1	1.0	1.1	1.1			
Distillate Fuel Oil <sup>2</sup>	2.8	2.8	2.9	2.7	2,3	2.5	2.2	2.5	2.6			
Residual Fuel Oil <sup>2</sup>	1.6	1.6	1.6	1.4	1.3	1.3	1.3.	1.4	1.3			
Other	3.5	3.3	3.2	3.1	3.1	3.4	3.6	3.5	3.7			
Total	14.8	14.8	15.5	14.8	14.3	15.3	14.9	15.4	15.4			
Average for Four-We	ek Perio	d Endina:										
1983	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9		
Motor Gasoline	6.8	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.6	6.6		•
Jet Fuel	1.1	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1		
Distillate Fuel Oil <sup>2</sup>	2,6	2.7	2.6	2.5	2.7	2.6	2.8	2.9	2.8	3.0		
Residual Fuel Oil <sup>2</sup>	1.3	1.3	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.2		
Other	3.9	3.9	3.8	3.8	3.8	3.6	3.6	3,4	3.4	3.4		
Total	15.6	15.6	15.5	15.3	15.4	15.3	15.4	15.5	15.2	15.3		

<sup>1</sup> Projected. See Appendix C for explanation of derivation of values.
2 Baginning in 1983, crude oil burned as residual fuel oil or distillate fuel oil is no longer reported to EIA and therefore is not included in 1983 product supplied calculations for these fuels.
The product supplied series for distillate and residual fuel oil for 1981 and 1982 shown on this page are the values published in 1981 and 1982 EIA publications and include crude oil transfers fabout 48 thousand barrels per day for residual fuel oil and 10 thousand barrels per day for distillate fuel oil). See Appendix D for further explanation.
Note: Detail data may not add to total due to independent rounding.

Source: a Monthly Data: 1981—1982, EIA, "Petroleum Supply Annual," 1983, EIA, "Petroleum Supply Monthly."

• Four-Week Averages: Estimates based on EIA weekly data.

• Projections: EIA, Office of Energy Markets and End Use (August 1982).

# Average Retail Selling Prices Motor Gasoline and Residential Heating Oil Cents per Gallon, Including Taxes)<sup>1</sup>

rear/Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981										•		
Motor Gasoline									4450	4467	4 40 0	146.0
Leaded Premium	133.8	141.0	144.9	145.1	144.7	144.6	144.6	144.4	145.6	145.7	146.2	129.3
Leaded Regular	123.8	132.1	135.2	134.4	133.3	132.4	131.5	131.0	130.5	129.9	129.7	136.5
Unleaded Regular	129.8	138.2	141.7	141.2	140.0	139.1	138.2	137.6	137.6	137.1	136.9	134.8
All-types	126.9	135.3	138.8	138.1	137.0	136.2	135.3	134.8	135.8	135.3	135.1	
Residential Heating Oil	114.4	123.4	125.5	123.9	122.7	120.9	121.0	119.4	119.7	118.8	120.8	122.0
1982												
Motor Gasoline											4.4.0	407.0
Leaded Premium	145.6	143.8	140.7	136.8	137.9	140.8	145.0	145.8	144.1	141.3	141.2	137.2
Leaded Regular	128.5	126.0	120.6	114.8	116.6	124.2	126.3	125.4	123.6	121.9	120.7	118.1
Unleaded Regular	135.8	133.4	128.4	122.5	123.7	130.9	133.1	132.3	130.8	129.5	128.3	126.0
All-types	134.1	131.8	126.8	121.0	122.4	129.6	131.8	131.0	129.5	128.0	126.8	124.4
Residential Heating Oil	122.0	120.7	115.3	113.2	114.3	116.2	115.8	115.9	115.2	119.6	121.6	119.7
1983												
Motor Gasoline												
Leaded Premium	135.3	131.8	127.4	132.1	137.6	142.9	144.6	143.7	140.5	137.2		
Leaded Regular	114.6	109.9	106.4	113.1	117.7	119.7	120.7	120.3	118.9	117.2		
Unleaded Regular	122.8	118.7	115.1	121.5	125.9	127.7	128.8	128.5	127.4	125.5		
All-Types	121.3	117.0	113.5	119.8	124.3	126.1	127.2	126.9	125.7	123.9		
Residential Heating Oil	114.7	111.4	104.9	103.5	104.8	106.0	105. <b>0</b>	104.9	P105.9			

# Refiner Acquisition Cost of Crude Oil (Dollars per Barrel)

Year/Type	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
1981 Domestic Imported Composite	32.71 38.85 34.86	36.27 39.00 37.28	36.97 38.31 37.48	35.58 38.41 36.58	35.21 37.84 36.11	34.20 37.03 35.03	33.76 36.58 34.70	33.79 35.82 34.46	33.47 35.44 34.11	33.48 35.43 34.07	33.49 36.21 34.33	33.51 35.95 34.33
1982 Domestic Imported Composite	33.39 35.54 33.95	32.71 35.48 33.40	31.08 34.07 31.81	30.27 32.82 30.83	30.37 32.78 31.02	30.79 33.79 31.74	30.92 33.44 31.74	30.85 32.95 31.45	30.76 33.03 31.40	31.38 33.28 31.98	31.57 33.09 32.07	30.80 32.85 31.29
1983 Domestic Imported Composite	30.55 31.40 30.73	29.16 30.76 29.49	28.69 28.43 28.64	28.45 27.95 28.33	28.68 28.53 28.64	28.67 29.23 28.85	28.74 28.76 28.75	28.58 29.50 28.88	28.69 29.54 28.97	P28.78 P29.51 P29.01		

Source: • Form EIA-14, "Rufiners Monthly Cost Report."

P-Preliminary.

1 Beginning in January 1983, residential heafing oil prices do not include taxes.

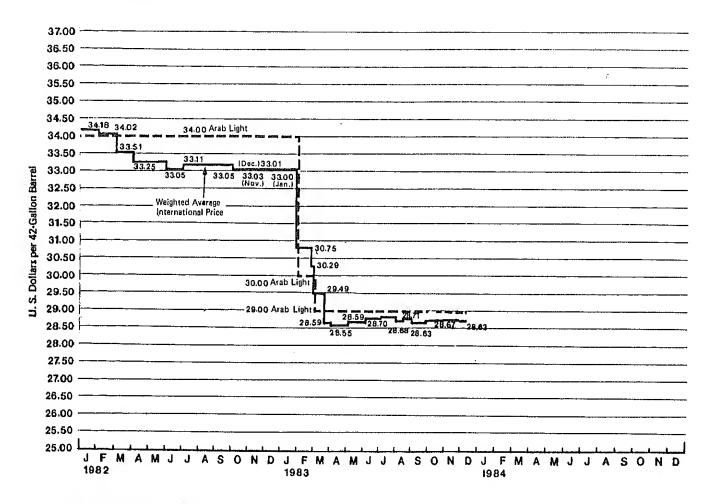
Note: Motor gasoline data include prices from self-service stations. Beginning with September 1981, the Bureau of Labor Statistics has changed the weights used in the calculation of average motor gasoline prices. In the "all types" category gasohol is now included, and unleaded premium is weighted more heavily.

Source: • Motor Gasoline—Bureau of Labor Statistics, See glossary for descriptions of survey.

• Residential Heating Oil—1981-1982: Form EIA—9A, "No. 2 Distillate Price Monitoring Report,"

1983: Forms EIA—782A, "Monthly Petroleum Product Sales Report," and EIA—782B, "Monthly No. 2 Distillate Sales Report."

# World Crude Oil Prices<sup>1</sup> (Dollars per Barrel)



<sup>1</sup> Internationally traded oil only. Average price (FOB) weighted by estimated export volume.

# World Crude Oil Prices<sup>1</sup> (Dollars per Barrel)

	Type of						Percent Change Current Price From		
Country	Crude/ API Gravity	Current Price	In Effect 1 Jan 82	In Effect 1 Jan 81	in Effect 1 Jan 80	In Effect 31 Dec 78	in Effect 1 Jan 80	In Effect 31 Dec 78	
ОРЕС									
Saudi Arabia	Arabjan Light 34 <sup>0</sup> (Bench mark crude)	29.00	34.00	32.00	26.00	12.70	11.5	128.3	
	Saudi Berri 390	29.52	35.40	33.52	27.52	13.23	7.3	123.1	
	Arabian Heavy 27 <sup>0</sup>	26.00	31.00	31.00	25.00	12.02	4.0	116.3	
Aby Dhabi	Murban 39 <sup>0</sup>	29.56	35.50	36.56	29.56	13.26	0	122.9	
Dubai	Fateh 32°	28.86	33.86	35.93	27.93	12.64	3.3	128.3	
Cater	Dulchen 400	29.49	35,45	37.42	2 29.42 2 30.00	13.19	0.2	123.6	
Iran	Iranian Light 34 <sup>0</sup> Kirkuk 36 <sup>0</sup>	28.00	34,20	37.00	<sup>2</sup> 30.00	13.45	-6.7	108.2	
Iraq	Kirkuk 36 <sup>0</sup>	29.83	34.93	37.50	29.29	13.17	1.8	126.5	
Kuwait	Kuwait Bland 31 <sup>0</sup>	27.30	32,30	35.50	27.50	12.22	-0.7	123.4	
Neutral Zone	Khafji 28 <sup>0</sup>	26.03	31.03	25.20	27.20	12.03	-4.3	116.4	
Algeria	Saharan 44°	30.50	37.00	40.00	33.00	14.10	·7.6	116.3	
Nigeria	Bonny Light 37°	30.00	36,50	40.00	29.97	15.12	0.1	98.4	
Libya	Es Sider 370	30.15	36.50	40.78	34.50	13.68	-12.6	120.4	
Indonesia	Minas 340	29.53	35.00	35.00	27.50	13.55	7.4	117.9	
Venezuela	Tia Juana 26 <sup>0</sup>	27.88	32.88	32.88	25.20	12.72	10.6	119.2	
Gabon	Mandji 30°	29.00	34.00	35,00	28.00	12.59	3.6	130.3	
Ecuador	Oriente 30°	28.20	34.25	40.06	33,50	12.35	-16.8	128.3	
Total OPEC <sup>3</sup>	NA	28.59	34.13	34.82	28.30	13.03	1.0	119,4	
Non-OPEC									
United Kingdom	Forties 36 <sup>0</sup>	29.90	36.50	39.25	29.75	14.00	0.5	113.6	
Norway	Forties 36 <sup>0</sup> Ekofisk 42 <sup>0</sup>	30,25	37.25	40.00	32.50	14.20	-6.9	113.0	
Mexico	Mexican Light 33	29.00	35.00	38.50	32.00	13.10	-9.4	121.4	
61	Mexican Heavy 22 <sup>u</sup>	25.00	26.50	34.50	28.00	NA	·10.7	NA	
Egypt	Suez Blend 33 <sup>0</sup>	428.50	34.00	40.50	34.00	12.81	·16.2	122.5	
Oman	Oman 340	29.00	35.00	37.50	30.26	13.06	-4.2	122.1	
Syria	Suwadivah 25°	25.00	30.00	36.03	31.39	11.64	-20.4	114.8	
Malaysia	Suwadiyah 25° Miri 38°	29.86	36.50	41.30	33,60	14.30	·11.2	108.7	
Brunel	Seria 36°	30.10	36.10	40.35	33,40	14.15	.9.9	112.7	
U.S.S.R.5	Export Blend 33°	28,60	35.49	39.25	33.20	13.20	∙13,9	116.7	
Total Non-OPEC 3	NA	28.70	34.35	38,54	31.94	13.44	-10.1	113.5	
Total World <sup>3</sup>	NA	28.63	34.18	35.49	28.84	13.08	∙0.7	118.9	
United States 6	NA	28.45	34,15	36.69	29,35	13.38	-3,1	112.6	

NA=Not Applicable.

1 Official sales prices or estimated term contract prices; spot prices excluded.

2 37e higher at 60 days' credit.

3 Average prices (FOB) weighted by estimated export volume.

4 On 60 days' credit.

5 Average delivered cost to Northwest Europe.

6 Average prices (FOB) weighted by estimated import volume.

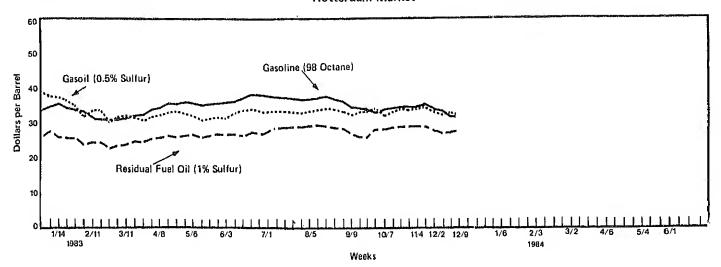
Source: • DOE, Office of International Affairs, December 13, 1983.

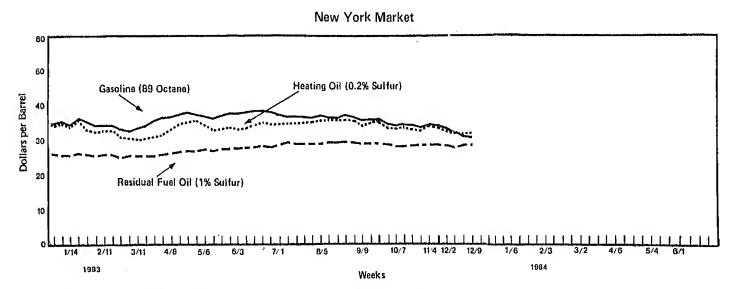
• Plati's Oligram Price Report.

• Petroleum Intelligence Weekly.

• Oil Buyers' Guide.

• Europe Oil Prices.





Source: Oil Buyers' Guide, Weekly Oil Market Product Report. Not published weeks of July 4 and December 25.

DOE, Office of International Affairs.

		Motor (	Gasoline	Gasoil/He	eating Oil	Residual	Fuel Oil <sup>2</sup>
		Rotterdam (98 Octane)	N.Y. <sup>3</sup> (89 Octane)	Rotterdam (0.5% Sulfur)	N.Y. <sup>4</sup> (0.2% Sulfur)	Rotterdam (1% Sulfur)	N.Y. <sup>3</sup> (1% Sulfur)
982 Nov	19	36.11	37.02	38.81	38.85	26.88	28.00
	26	36.28	36.33	38.87	37.06	26.88	27.50
Dec	3	33.65	35.76	38.67	35,07	26.95	26.75
	10	33.88	36.50	38.20	36.96	26.80	25.75
	17	34.00	<b>3</b> 5.13	<b>3</b> 9. <b>7</b> 5	36.12	26.73	26.35
	24	33.70	34.92	39.28	34.86	26.73	26.35
	31	Not availab	ole.				
983 Jan	7	34.88	35.13	<b>3</b> 7, <b>7</b> 3	34.86	27.55	25.75
	14	35.46	34.82	37,47	34.44	26.73	25.75
	21	34.29	36.29	37.00	<b>3</b> 5.60	26.58	26.00
	28	33.88	35.03	34.45	33.08	25.98	25.50
Feb	4	33.70	34.57	32.37	32.55	23.87	25.00
, 55	11	31.48	34.82	33.98	32.76	24.47	26.00
	18	31.48	34.82	33.98	32.76	24.47	26.00
	25	30.72 <sup>-</sup>	33.24	<b>3</b> 0.63	31.08	22.97	25.00
		31.01	32.99	31.70	30.56	23.50	25.25
Mar	4			31.70	30.45	24.17	25.25 25.25
	11	31.65	33.41				
	18	32.30	34.57	31,64	30.56	24.92	25.25
_	25	32.53	35.57	30.90	30.76	24.7C	25.25
Apr	1	33.82	36.77	31.70	31.71	25.23	25.75
	8	34.70	36.77	32,51	32.66	25.30	26.00
	15	36.69	<b>3</b> 7. <b>0</b> 9	<b>3</b> 3.58	34.65	<b>25.9</b> 0	26.50
	22	35.58	37.40	<b>3</b> 3.78	35.28	<b>2</b> 5.60	26.75
	29	36.75	37.19	<b>33</b> .51	35.49	<b>2</b> 5.98	26.75
May	6	36.28	36.88	<b>3</b> 2.51	34.54	25.98	27.00
•	13	34.94	36,67	<b>3</b> 1.57	33.18	25.30	26.50
	20	35.35	36.98	31.97	33.28	25.75	27.00
	27	35.58	37.19	32.24	33.50	26.13	27.25
Jun	3	35.76	37.19	32.10	33.28	25.98	27.50
	10	35.81	37.32	<b>3</b> 3.24	33.39	25.98	27,60
	17	36.87	37,84	33,38	34.12	25.83	28.05
	24	37.87	37.84	<b>3</b> 3.51	34.23	26.80	28.50
Jul	1	37.16	37.42	32.84	34.02	26.28	28.35
561	8	Not availab		Q2.04	0-1.02	20.20	20.00
	15	36.81	36.62	33.18	34.23	28.00	29.00
	22	36.28	36.63	33.18	34.23	28.23	28.75
	29	36.05	36.52	33.04	34.34	28.15	28.75
Aug	5	36.22	36.64	33.71	35.18	28.53	28.75
Aug	12		36.52	34.18	35,28	28.68	29.00
		36.40	36.52	34.79	35.28	28.53	29.00
	19	36.52				28.38	29.35
_	26	36.34	36.73	34.65	35.28		
Sep	2	35.87	36.29	34.18	35.07	28.08	29.25
	9	34.47	35.99	33.58	34.65	27.33	28.75
	16	34.35	35.78	33.44	34.86	26.95	28.75
	23	34.41	<b>3</b> 5.87	<b>33</b> .85	35.01	26.95	28.75
*	30	33.24	34.92	33.71	34.02	27.63	28.75
Oct	7	33.41	34.29	32.51	33.50	27.40	28.00
	14	33.59	34.82	33.11	34.02	27.48	27.95
	21	34.17	34.40	34.05	33,28	27.78	27.90
	28	34.41	33.94	33.98	33.18	27.78	28.10
Nov	4	34.70	34.65	34.25	34 65	28.08	28.25
	11	35.05	34.25	34.65	34.12	27.85	28.75
	18	33.94 33.59	33.54	32,91	33.28 33.18	27.33	28.50
	18 25 2 9	33.59 33.06 32.94	33.08	32.84	33.18	26.43	28.25 28.20
Dec	ク	33.06	32.66 31.90	33,58 33,11	32.97	26.65	フォンロ

<sup>1</sup> Refers to No. 2 Heating Oil.
2 Refers to No. 6 Oil.
3 East Coast Cargoes.
4 New York Harbor Reseller Barge Prices.
Source: • Oil Buyers' Guide, Weakly Oil Market Product Report. Not published weeks of July 4 and December 25.
• DOE, Office of International Affairs.

## Weather Summary (Population Weighted Heating Degree-Days1)

Weather data reported in the Weekly Petroleum Status Report are now taken directly from a computerized system implemented by the National Oceanic and Atmospheric Administration.

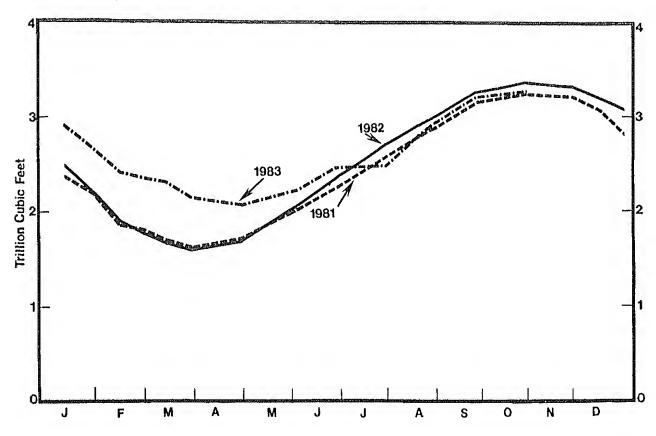
The weather for the nation, as measured by population-weighted heating degree-days from July 1, 1983 through December 10, 1983, has been 6 percent warmer than normal and 3 percent cooler than last year.

U.S. Total Heating Degree-Days (Population Weighted) and By City

				Percent	Change
	1983 This year	1982-1983 Last year	Normal	This year vs. Last year	This year vs. Normat
July 1 - June 30		4,500	4,694		
July 1 - December 10	1,118	1,082	1,184	3	-6
Cities					
Albuguerque	1,056	1,275	1,160	-17	-9
Amarillo	968	1,122	1,081	-14	~10
Asheville	1,045	1,031	1,139	i	-8
Atlanta	709	592	717	20	-0 -1
Billinys	1,871	1,993	1,992	-6	<b>-6</b>
Boise	1,540	1,777	1,634	-13	<u>-</u> 6
Boston	1,221	1,129	1,291	-13	-5
Buffalo	1,634	1,452	1,666	13	-2
Cheyenne	2,056	2,274	2,089	-10	-2 -2
Chicago	1,629	1,573	1,545	4	-2
Cincinnati	1,296	956	1,301	36	5 0
Cleveland	1,474	1,265	1,501	17	-2
Columbia, SC	639	553	626	16	2
Denver	1,667	1,825			2
Des Moines			1,646	-9	1
Detroit	1,656	1,542	1,583	7	5
	1,633	1,480	1,648	10	-1
faryo kant fond	2,520	2,535	2,454	-1	3
Hartford Houston	1,498	1,360	1,527	10	-2
Jacksonyi 1 le	231	292	337	-21	-31
	261	163	282	60	-7
Kansas City	1,312	1,333	1,254	-2	. 5
Las Veyas	475	690	588	-31	-19
Los Angeles	207	189	327	10	-37
Memphis	636	611	756	4	-16
Mi ami	4	0	14	***	***
Milwaukee	1,722	1,677	1,797	3	-4
Minneapolis	2,139	1,982	2,043	8	5
Montgomery	421	303	538	39	-22
New York	1,065	948	1,075	12	-1
Oklahoma City	828	843	873	-2	<b>~</b> 5
Omaha	1,717	1,638	1,520	5	13
''' 'ia	1,157	984	1,148	18	1
	236	200	279	18	-15
	1,477	1,283	1,515	15	-3
	1,796	1,776	1,948	1	-8
	1,239	1,192	1,410	4	-12
	851	705	856	21	-1
	1,042	757	955	38	9
	1,056	1,057	1,189	Ü	-11
	1,189	1,407	1,456	-15	-18
ty	1,226	1,775	1,558	-31	-21
ž	480	851	880	-44	-45
<b>-</b> .	1,450	1,503	1,565	-4	-7
	513	552	514	- <del>7</del>	Ú
)C	870	747	935	16	- <b>7</b>

ve measurements of outdoor air temperature. Cooling degree-days are defined as deviations of the mean daily pling station above a base temperature equal to 65° F by convention. Heating degree-days are deviations of the are below 65° F. For exemple, if a weather station recorded a mean daily temperature of 78° F, cooling tation would be 13 and no heating degree-days. A weather station recording a mean daily temperature of 40° F ing degree-days and no cooling degree days.
n 100 or ratio incalculable.
sanic and Atmospheric Administration, Department of Commerce.

ıtural Gas In Underground Storage rillion Cubic Feet)



		Working Gas <sup>1</sup>		
	1981	1982	1983	
January 15	2.368	2.492	2.902	
January 31	2.152	2.182	2.644	
February 15	1.853	1.900	2.433	
February 28	1.824	1.787	2.356	
March 15	1.699	1.661	2.305	
March 31	1.631	1.604	2,148	
April 30	1.764	1.676	2.074	
May 31	1.977	2.034	2,222	
June 30	2.252	2.369	2,454	
July 31	2.558	2.704	2.695	
August 31	2.882	2.998	2.908	
September 30	3.152	3.251	3.141	
October 31	3.248	3.364	3.269	
November 30	3.201	3.309	P3.174	
December 15	3.048	3.197		
December 31	2.817	3.071		

Preliminary
Working Gos: Gas available for withdrawel,
urce: o FPC-8/EIA-191, "Underground Gas Storage Report"

# Appendix A. EIA WEEKLY DATA: SURVEY DESIGN AND ESTIMATION METHODS

he Weekly Petroleum Reporting System (WPRS) comprises five surveys: the "Weekly Refinery Report" (EIA-800); the "Weekly ulk Terminal Report" (EIA-801); the "Weekly Product Pipeline Report" (EIA-802); the "Weekly Crude Oil Stocks Report" (EIA-803); and the "Weekly Imports Report" (EIA-804). The EIA weekly reporting system, as part of the Petroleum upply Reporting System, was designed to collect data similar to those collected monthly. In the WPRS, selected petroleum companies report weekly data to EIA on crude oil and petroleum product stocks, refinery inputs and production, and crude oil and petroleum product imports. On the Forms EIA-800 through EIA-803, companies report data on a custody basis. On the Form IA-804, the importer of record reports each shipment entering the United States. Current weekly data and the most recent ionthly data are used to estimate the published weekly-totals.

#### Sample Frame

The sample of companies that report weekly in the WPRS was selected from the universe of companies that report monthly. All sampled companies report data only for facilities in the 50 States and District of Columbia. The EIA-800 sample rame includes all petroleum refineries in the United States and its territories, industrial facilities that have crude oil distillation apacity and produce some refined petroleum products, and bulk terminals that blend motor gasoline. The EIA-801 sample rame includes all bulk terminal facilities in the United States and its territories that have total bulk storage capacity of 50,000 arrels or more, or that receive petroleum products by tanker, barge, or pipeline. The EIA-802 sample frame includes all petro-eum product pipeline companies in the United States and its territories that transport refined petroleum products, including interstate, intrastate and intracompany pipeline movements. Pipeline companies that only transport natural gas liquids are not included in the EIA-802 frame. Only those pipeline companies which transport products covered in the weekly survey are included. The EIA-803 sample frame consists of all companies which carry or store crude oil of 1,000 barrels or more. Included are gathering and trunk pipeline companies (including interstate, intrastate, and intracompany pipelines), crude oil producers, terminal operators, storers of crude oil, and companies transporting Alaskan crude oil by water. The EIA-804 sample frame includes all importers of record of crude oil and petroleum products into the United States.

#### Samplin

The sampling procedure used for the weekly system is the cut-off method. In the cut-off method, companies are ranked from argest to smallest on the basis of the quantities reported during some previous period. Companies are chosen for the sample eginning with the largest and adding companies until the total sample covers about 90 percent of the total for the previous time eriod.

	Refiners Bulk (Refinerles) Terminals		Crude Oil Pipelines Stock Holders Importers				
Veekly Form	E1A-800	EIA-801	EIA-802	E1A-803	E1A-804		
fonthly Frame Size	172(300)	276	78	168	1086		
Veekly Sample Size	60(165)	88	46	82	62		

#### Collection Methods

Data are collected by mall, mailgram, telephone, Telex, and Telefax on a weekly basis. All canvassed firms and terminal operating ompanies must file by 5:00 p.m. on the Monday following the close of the report period, 7 a.m. Friday. During the processing week, company corrections of the prior week's data are also entered.

## Estimation and Imputation

After the company reports have been checked and entered into the weekly data base, ratio estimates of the weekly totals are alculated from the reported data. First, the current week's data for a given product reported by companies in that region are ummed. (Call this weekly sum, W<sub>s</sub>). Next, the most recent month's data for the product reported by those same companies are ummed. (Call this monthly sum, M<sub>s</sub>). Finally, let M<sub>t</sub> be the sum of the most recent month's data for the product as reported y all companies. Then, the current week's ratio estimate for that product for all companies, W<sub>t</sub>, is given by:

$$W_t = \frac{M_t}{M_s} \cdot W_s$$

his procedure is used directly to estimate total weekly inputs to refineries and production. To estimate stocks of finished roducts, the preceding procedure is followed separately for refineries, bulk terminals, and pipelines. Total estimates are formed y summing over establishment types,

leakly imports data are highly variable on a company-by-company basis or a weak-by-week basis. Therefore, an exponentially moothed ratio has been developed. The estimate of weekly imports is the sum of the smoothed ratio multiplied by the weekly alues and estimates for shipments from Puerto Rico. Imports of other oils includes an adjustment from Census data for uncensed products because of coverage differences between the monthly imports data and Census data.

xplicit imputation is done for companies which do not respond in a given week. The imputed values are exponentially noothed means of recent reports from the specific company.

### Response Rates

he response rate as of the day after the filing deadline is about 80 percent for the EIA-800; 75 percent for the EIA-801; 95 ercent for the EIA-802; 80 percent for the EIA-803; and greater than 95 percent for the EIA-804. However, more forms are received the next day, bringing the final response rates up. Late respondents are contacted by telephone. Nearly all of the major companies report on time. The nonresponse rate for the published estimates is usually between 2 percent and 5 percent.

# Appendix B. INTERPRETATION AND DERIVATION OF AVERAGE INVENTORY LEVELS

The national inventory (stocks) graphs for total petroleum products, crude oil, motor gasoline, distillate fuel oil, and residual fuel oil in this publication include features to assist in comparing current inventory levels with past inventory levels and with judgments of critical levels. Methods used in developing the average inventory levels and minimum operating levels are described below.

#### Average Inventory Levels

The charts displaying inventory levels of total petroleum products (p. 7), crude oil (p. 7), motor gasoline (p. 9), distillate fuel oil (p. 11), and residual fuel oil (p. 13) provide the reader with actual inventory data compared to an "average range" from the most recent 3-year period running from January through December or from July through June. The ranges are updated every six months in March and October. The 3-year period is adjusted by dropping the oldest 6 months and including the most recent 6 months. The ranges also reflect seasonal variation determined from a longer time period. The seasonal factors, which determine the shape of the upper and lower curves, are updated annually in October, using the most recent year's final monthly data.

The monthly seasonal factors are estimated by means of a seasonal adjustment technique developed at the Bureau of Census (Census X-11). The seasonal factors are assumed to be stable (i.e., unchanging from year to year) and additive (i.e., the series is deseasonalized by subtracting the seasonal factor for the appropriate month from the reported inventory levels). The intent of deseasonalization is to remove only annual variation from the data. Thus, deseasonalized series would contain the same trends, cyclical components, and irregularities as the original data. The seasonal factors for total petroleum (crude and products), crude oil, distillate fuel oil, and residual fuel oil were derived using monthly data from 1976-1982. For motor gasoline, the seasonal factors were based on monthly data from 1976 and 1978-1982. In 1977, monthly stock levels of motor gasoline stayed at the same high level for the entire year. Since there was virtually no seasonal behavior in motor gasoline stocks that year, 1977 was not used in the determination of seasonal patterns for motor gasoline stocks.

After seasonal factors are derived, data from the most recent 3-year period (January-December or July-June) are deseasonalized. The average of the deseasonalized 36-month series determines the midpoint of the deseasonalized average band. The standard deviation of the deseasonalized 36-months is calculated adjusting for extreme data points. The upper curve of the "average range" is defined as the average plus the seasonal factors plus the standard deviation. The lower curve is defined as the average plus the seasonal factors minus the standard deviation. Thus, the width of the "average range" is twice the standard deviation. The values of the upper and lower curves are presented in the table below.

# Values of Average Ranges in Inventory Graphs (Millions of Barrels)

	Jan	Føb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
The state of the s						Lower R	ange					
Total Petroleum Crude Oil Motor Gasoline Distillate Fuel Oil Residual Fuel Oil	1121.1 350.1 244.8 144.5 59.5	1075.5 348.5 247.7 115.4 51.1	1071.2 355.8 245.2 103.8 50.9	1076.5 359.5 235.8 102.5 51.2	1089.1 356.4 226.4 111.6 55.9	1102,3 356,3 221,3 126,1 53,7	1129.4 354.7 221.3 147.1 55.9	1146.1 346.9 218.6 167.7 56.9	1167.8 346.5 219.4 184.1 61.8	1174.1 354.6 214.2 189.0 65.0	1177.0 353.9 221.4 188.7 65.6	1141.0 344.0 227.9 170.9 65.0
						Upper R	lange					
Total Petroleum Crude Oil Motor Gasoline Distillate Fuel Oil Residual Fuel Oil	1292.0 377.7 276.0 191.0 82.4	1246.5 376.1 278.9 161.8 74.1	1242.1 383.4 276.4 150.3 73.9	1247.4 387,2 267,0 149.0 74.2	1260.0 384.1 257.6 158.1 78.9	1273.2 383.9 252.6 172.6 76.7	1300.3 382.3 252.5 193.6 78.8	1317.1 374.6 249.8 214.2 79.9	1338.7 374.1 250.6 230.5 84.8	1345.0 382.2 245.4 235.5 88.0	1347.9 381.5 252.6 235.2 88.6	1311.9 371.7 259.2 217.3 88.0

## Minimum Operating Inventories

The lines labeled "Minimum Operating Inventory" (MOI) on the stocks graphs for crude oil, motor gasoline, distillate fuel oil, and residual fuel oil represent estimates of those inventory levels made by the National Petroleum Council (NPC) and published in November 1983 in "Petroleum Inventories and Storage Capacity -- An Interim Report." The NPC defines the MOI as the inventory level below which operating problems and shortages would begin to appear in a defined distribution system. The NPC report presents the findings of a study which was directed by the NPC's Committee on Petroleum Inventories and Storage Capacity. MOI estimates presented in the report were developed by consensus through a decision-making process that relied on the judgment of Committee members based on their operating experience, on historical inventory trends, and on the results of an NPC survey of companies that provide primary inventory data to the Energy Information Administration.

The estimated values are: Crude oil -- 285 million barrels; motor gasoline -- 200 million barrels; distillate fuel oil -- 105 million barrels; and residual fuel oil -- 40 million barrels.

The NPC did not develop a minimum operating inventory level for total petroleum stocks. The line labeled "observed minimum" on the "Stocks of Crude Oll and Petroleum Products, U.S. Total" graph is the lowest inventory level observed during the same 3-year base period that was used in the derivation of the average inventory levels shown on the graph.

# Appendix C. PROJECTION OF PRODUCT SUPPLIED FROM THE AUGUST 1983 SHORT-TERM ENERGY OUTLOOK

The projections of "high" and "low" total petroleum demand, shown in the WPSR as total product supplied, are from the Office of Energy Markets and End Use, Short-Term Energy Outlook (Outlook), August 1983.

The three forecast cases presented in the <u>Outlook</u> are based on differing assumptions about the growth of the U.S. economy and the associated price of imported crude oil to U.S. refiners. In the high economic growth case, it is assumed that the price of imported crude oil falls to \$25 per barrel by the beginning of 1984 and remains at that level through the forecast period. In the base case, it is assumed the average cost for imported crude to U.S. refiners remains at \$29 per barrel. In the low economic growth case, it is assumed that imported crude oil prices rise at twice the U.S. rate of inflation.

The "high-demand" case shown in the figure is formed by adding the high economic growth forecast of total demand to the square root of the sum of the squares of the increases in demand that result from the following changes in key variables: (1) a 10-percent increase in heating degree-days over the base case in the first and fourth quarters (heating season) in the forecast period and (2) a 15-percent increase in cooling degree-days over the base case in the second and third quarters. The "low demand" case is formed by subtracting from the low economic growth forecast the square root of the sum of the squared decreases in demand resulting from decreases from the base case assumptions for heating degree-days and cooling degree-days that are equal in magnitude (but opposite in sign) to the changes in the "high demand" case.

For detailed information on the forecast, please refer to the published report, Short-Term Energy Outlook, August 1983.

Copies of the report are available from:

National Energy Information Center Room 1F-048, Forrestal Building 1000 Independence Avenue, S. W. Washington, D. C. 20585 Telephone 202-252-8800

## Appendix D. CHANGE IN 1983 WEEKLY PETROLEUM STATUS REPORT SERIES

e data series presented in the 1983 issues of the Weekly Petroleum Status Report (WPSR) are different from 1982 WPSR data series. The differences, the are discussed below, are the result of changes made in the 1983 weekly data collection forms of the Petroleum Supply Reporting System, a change in nation methodology, and changes in the sample frame.

#### Changes from Data Forms

983, weekly petroleum supply forms collect data for finished motor gasoline production, stocks, and imports. This change means that the components 983 WPSR motor gasoline product supplied estimates are definitionally the same as the components of the monthly product supplied estimates alated from monthly data. In 1982, weekly forms combined imports of motor gasoline blending components with finished motor gasoline imports in a le category: total motor gasoline incorts. In 1983 imports of motor gasoline include finished product only. In 1983, weekly forms include imports of or gasoline blending components in other oils imports. In the 1983 WPSR publication, the monthly other oils series for 1981 and 1982 (see p. 15) ades imports of motor gasoline blending components. In 1982, imports of motor gasoline blending components averaged 39 thousand barrels a day and set between 19 and 50 thousand barrels per day.

psene production and stocks reports are not collected on 1983 weekly forms. Consequently, in 1983, the weekly other oils stocks estimate (pgs. 3 and 6) udes kerosene. Other oils product supplied, which is calculated for the WPSR as the difference between total product supplied and the product supplied nates of listed products, is larger in 1983 because it includes kerosene product supplied, which can no longer be calculated from weekly data (see p. 16). It is seen tooks in 1982 ranged between 8.8 and 10.4 million barrels. The values of kerosene product supplied averaged 128 thousand barrels per day in 2.

#### Change in Methodology

983, reports of crude oil used as fuel on leases are treated as reports of crude oil product supplied, a new product supplied category. Before 1983, crude used in this feshion was reported as a use of distillate fuel oil or residual fuel oil and was included in the respective product supplied calculations. Weekly nates for product supplied made in 1983 do not include estimates for these quantities and are compared in the U.S. Petroleum Balance (p. 3) to recast 2 data. The monthly series for 1981 and 1982 shown on p. 16 are the quantities originally calculated and published including crude oil used as fuel. In 2, the quantities of crude oil used directly in the distillate fuel oil product supplied and residual fuel oil product supplied calculations averaged 10 used barrels per day and 48 thousand barrels per day, respectively.

#### Change in Stock Basis

list of operators of bulk terminals, pipelines, and crude stock holders required to report each month about crude oil and petroleum product stocks was ated in a regular review of the petroleum supply reporting frame during 1982. (See the article in the Petroleum Supply Monthly, March 1983 for details.) s expansion was first incorporated in monthly data published for January 1983. The new list of operators was also used to select new samples for EIA ms 801 (bulk terminals), 802 (pipelines), and 803 (crude stock holders) of the weekly petroleum reporting system. The new weekly sample was used for mation beginning with the week ending April 1, 1983. Estimates for the weeks between the end of January 1983 and April 1, 1983 were revised to act the contributions of the new frame members. The revisions were done by using information about the stocks held by the new and old reporters on ember 31, 1982. The table below shows the new-basis stock levels for December 31, 1982 which can be compared with the old frame stock levels shown the respective pages of the WPSR. The new-basis stocks of crude oil and petroleum products, including the Strategic Petroleum Reserve, are 2.2 percent iter than the old basis stocks.

#### New Basis Stock Levels for Crude Oil and Petroleum Products, December 31, 1982

	Percent Increase	U.S. Total	PAD 1	PAD 2 (Th	PAD 3 ousands of Barrel	PAD 4	PAD 5
ide Oil	0.0 <sup>1</sup>	643,871	17,550	78,556	453,697	13,491	80,577
tel Motor Gasoline	3.8	244,279	69,397	67,135	68,016	8,559	31 <b>,</b> 172
Finished Gasoline	4.1	202,537	64,116	57,903	51,182	6,086	23,260
Blending Components	2.0	41,742	5,281	9,232	16,834	2,473	7,922
ph the Type Jet Fuel	26.9	7,189	1,384	1,310	2,367	349	1,779
rosene-Type Jet Fuel	2.6	32,001	9,626	7,310	9,004	638	5,423
rtillate Fuel Oil	3.9	185,579	84.681	48,221	34,921	4,051	13,705
sidual Fuel Oil	3,1	68,229	35.686	5,383	16,698	634	9,828
finished Oils	0.0	105,277	13.656	17.784	46,209	2,686	24,942
her Oils	7,1	176,592	22.073	49,714	90,142	3,757	9,906
tal Olls	2.21	1,462,017	254,053	275,413	721,054	34,165	177,332

<sup>1</sup> Calculated including stocks of crude oil in Strategic Petroleum Reserve (293,827 thousand barrels on December 31, 1982). Source: EIA, "Petroleum Supply Monthly."

# Appendix E. CALCULATION OF WORLD OIL PRICES (page 19)

The weighted average international price of oil, shown in the "Highlights" and on page 19, is an average calculated using specific crude oil prices weighted by the estimated crude oil export volume for each oil-producing country. To develop the table shown on page 19, a list of major oil producing/exporting countries was chosen. For each country, the official selling price of one or more representative crude oils was determined by investigating a number of industry publications (i.e., "Oil Buyers' Guide," "Platt's Oilgram Price Report," "Petroleum Intelligence Weekly," and "Europe Oil Prices") and by contacting oil market analysts.

Then, the appropriate crude oil volumes to be used as weighting factors for each country were determined. These volumes are estimates based on a number of sources which provide data on production, consumption, and exports for these countries. Export volumes for a number of smaller producing/exporting countries, not listed in the table, are included in the weighting factors. After the export volumes had been determined, simple mathematical weighted averages were calculated to arrive at the "Total OPEC," "Total Non-OPEC," and "Total World" prices.

The average United States (FOB) import price is derived by the same basic procedure as the world oil price, that is, taking the representative official crude oil price of a specific crude oil from a particular country and weighting this price by a certain volume of crude oil. In this case, the weighting factors are the volumes of crude oil imported into the U.S. from pertinent countries. Import volumes from a number of smaller producing/exporting countries, not listed in the table, are included in the weighting factors.

Both the import and export volumes are preliminary. Due to their origin, these estimates cannot be fully verified. These volumes are updated monthly, or more frequently when changes in oil market conditions make updating appropriate.

#### Glossary

- Barrels, 42-gallon barrels,
- Crude Oll. A mixture of hydrocarbons that existed in Iliquid phase in undarground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Lease condensate and drips are included but topped crude oil (residual) and other unfinished oils are excluded.
- Crude Oil Input. The total crude oil put into procession units at refineries.
- Distillate Fuel Olls. Includes No. 1, No. 2, and No. 4 fuel oils, and No. 1, No. 2, and No. 4 diesel fuels. These are light fuel oils used primarily for home heating as a diesel engine fuel (including railroad angles) fuel and fuel for agricultural machinery), and for electric power generation.
- Gross Inputs. The crude oil, unfinished oils, and entural gas plant liquids put into distillation units.
- Imports. Unless otherwise specified in this report, refers to gross imports. Imports of minor products ("other oils") include aviation gasoline, kerosene, unfinished oils, liquefied patroloum gases, plant consentate, patrochemical feedstocks, lube oils, waxes, special onpittines, coke, asphalt, blanding components, and other miscolianeous oils.
- Jet Funl, Includes kerosone-type jet fuel and naphthetype jet fuel. Kordsene-type jet fuel is a kerosene quality product used primerily for commercial turbojet and turboprop alreraft engines. Naphthe-type jet fuel is a fuel in the heavy naphthes range used primerity for military turbojet and turboprop aircraft unglates.
- Motor Gasoline, 1-inished leaded gasoline, finished untended gasoline, and bleuding components in the gasoline range. Production and imports data represent finished leaded gasoline and finished unleaded gasoline, Stocks data consist of the two types of finished gasoline and bleading components. Stock change used in the calculation of motor gasoline product supplied is the change in finished motor gasoline stocks. Imports of motor gasoline bleading components are certained in other sits imports.
- Operable Capacity. The maximum amount of input that can be processed by a crude oil distillation unit in a 24-hour period, making allowances for processing limitations due to types and grades of inputs, limitations of downstream facilities, scheduled and unscheduled downstream facilities, scheduled and unscheciudes any shutdown capacity that could be placed in operation within 90 days.
- Product Supplied. A value calculated for specific products which is equal to domestic production plus not imports limports less exports), less the net increase in primary stocks. Total products supplied is calculated as inputs to refinerles, plus estimated refinery gains, plus other hydrocarbon input, plus product imports, less product exports, less the net increase in product stocks. Values shown for "Other Oils" product supplied are the difference between total product supplied and product supplied values for specified products. Other oils product supplied incorporates crude oil product supplied and reclassified product adjustment.
- Roflnor Acquisition Cost of Crude Oil. The average price paid by refiners for crude oil booked into their refineries in accordance with accounting procedures generally accepted and consistently and historically applied by the refiners concerned. Domestic crude oil is that oil produced in the United States or from the outer continental shelf as defined in 43 USC Section 1131. Imported crude oil is any crude oil which is not domestic oil. The composite is the weighted average price of domestic and imported crude oil. Prices do not include price of unfinished oils or SPR.

- Refinery Capacity Utilization. Ratio of the total amount of crude oil, unfinished oils, and natural gas plant liquids run through crude oil distillation units to the operable capacity of these units. In the period 1979-1982 the refinery capacity utilization for all U.S. refineries ranged between 87 percent and 65 percent. The ratio for an individual refinery may fluctuate much more depending on the type of crude and other raw materials processed, the type of products produced, and the operating conditions of the refinery.
- Residual Fuel Oils. Includes No. 5 and No. 6 fuel oils which are heavy oils used primarily for electric power generation, for industrial and commercial space heating, as a ship fuel, and for various industrial uses.
- Retail Motor Gasoline Prices. Motor gasoline prices calculated each month by the Bureau of Labor Statistics (BLS) in conjunction with the construction of the Consumer Price Index (CPI). These prices are collected in 85 urban areas selected to represent all urban consumers—about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-service).
- Stocks. For individual products in WPSR, quantities held at refineries, in pipelines, and at bulk terminals with a capacity over 50 thousand barrels. Stocks held by product retailers and resellers, as well as tertiary stocks held at the point of consumption, are excluded. Stocks of individual products held at ges processing plants are excluded from individual product estimates but included in "Other Oils" estimates and "Total."
- Stock Change (Refined Products). Component of Product Supplied calculation shown on U. S. Petro-leum Balance. The product stock change shown on the U.S. Petroleum Balance Sheet for the current 4-week period is calculated in the following way: an average daily stock change is calculated for major refined products (i.e., all actual reported stocks); this stock change is added to an estimate for minor product stock change based on historical monthly data; a daily average stock change for refined product stocks for the 4-week period is then calculated. To calculate minor product stock change, the stock levels shown for other oils in the stock section of the balance sheet are used. These other oils stock levels are derived by: 1) computing an average dally rate of stock change for each month based on monthly data for the past six years; 2) using this daily rate and the minor stock level from the most recent monthly publication to estimate the minor product stock level for the current period.
- Unaccounted-for Crude Oil. Term which appears in U.S. Petroleum Balance Sheet. It reconciles the difference between data (or estimates) about supply and data (or estimates) about use. Its value can be positive or negative since it is a balancing term. As it appears in the monthly publications, it reflects the accuracy of the reported data on crude oil imports, production, stocks, refinery input, losses, exports, and transfers (crude oil burned directly as fuel oil). It reflects the quality of the estimates as well as the accuracy of the reported data. Because the unaccounted for crude oil figure reflects the accuracy of reported and estimated figures, one would expect the figure to be larger in balances using preliminary or estimated data and smaller in balances using the final data. In fact, the published figures confirm this expectation. In the WPSR, four-week averages for the previous year are interpolated from final monthly data, so that the unaccounted for crude oil value for the previous years is considerably smaller than that for the current period.
- United States. For the purpose of this report, the 60 states and the District of Columbia. Data for the Virgin Islands, Puerto Rico, and other U.S. territories are not included in the U.S. totals.